

## Earning Your Trust



PERFORMANCE PRODUCTS

#### Dear Painless Customer,

In 2015 we celebrate 25 years in business - 25 years of helping our fellow rodders, our friends in racing and off-roading, find painless solutions to their automotive electrical needs. What started out as a single idea about a simplified way to wire a street rod has evolved into what is today a multi-faceted company with sixty-six employees in a modern 45,000 square foot facility manufacturing over 500 products for show cars, dragsters, rock crawlers and everything in between.

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Dennis Overholser, one of the founders of the company, remembers well selling his first wiring harness at the 1990 Pate swap meet in Cresson, TX. In fact, he sold three that weekend, an unimaginable fortune in those early days. Back then, the company was known as Perfect Performance Products. As the word spread about the quality of the harness and the ease of installation, editorial writers for leading magazines came knocking, wanting to learn more about this fast selling new product. In a 1991 article in Hot Rod Mechanix Magazine, Tex Smith ended his review by stating, "Folks, this is really painless wiring!" The name caught on and Painless Wiring was on its way.

The company grew rapidly over the next few years and it became evident that it could no longer efficiently build harnesses one at a time for sale direct to the public. A national distribution network was needed to handle the growing demand and Painless was soon available at national auto parts chains, warehouse distributors, mail order outlets and independent retailers everywhere. Customers could now benefit from the cost savings resulting from longer production runs, consolidated distribution and reduced shipping costs.

In 1999 the company changed its name to Painless Performance Products to more accurately reflect the growing diversity of the product line. While all this was going on, the company was receiving more and more recognition from the industry for the innovation and engineering excellence of its products. The highest recognition comes each year at the SEMA Industry Awards Banquet in Las Vegas. Most companies have never been nominated for nor won a single Best New Product award. Painless has been nominated ten times for awards recognizing engineering excellence and has been honored with three Best New Product Awards and eight Runner-ups. Additionally, Dennis Overholser received the 1999 Industry Recognition Award by the Street Rod Marketing Alliance (a SEMA council) and at the 2002 SEMA Awards Banquet Painless was named Manufacturer of the Year. Painless was again recognized as Manufacturer of the Year in 2010 and 2011 by the Performance Warehouse Association, while company president Adrian Murray was named Person of the Year in 2002 and 2009. After retiring in 2011, Dennis was inducted into both the Hot Rod Industry Alliance and the Motorsports Parts Manufacturers Council Halls of Fame in 2013.

Awards are nice and it is always an honor to have your efforts recognized by your peers. But what really counts is having the loyalty, support and respect of your customers. For that, Painless is deeply honored. Over the years competitors have come and gone, trying to duplicate Painless' success. Our customers keep returning, year after year, project vehicle after project vehicle because they know they can count on Painless for a quality product that does what we say it will do. They know that our service after the sale is unequaled in the industry. If you have questions or need help, you won't get a busy signal or be left eternally on hold. We take customer service seriously and continuously expand our technical services department as demand and conditions warrant. We treat you as we ourselves want to be treated. In the end, we are all consumers.

We know full well that our success depends on how well we serve you, our customers. Should you wish to voice any concerns or should you have any questions we urge you to give us a call or visit us at the many car shows and events we attend throughout the year. We would appreciate the opportunity to thank you in person for being the most important reason for our success.

Sincerely, Your Friends at Painless Performance



PERFORMANCE PRODUCTS

## Product Index











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Graphic Design & Production: Middleton Performance Marketing

Photo credits: Andrew Erichsen, Alan Middleton, Mike Artman-NAMTRA media, Randy Clark-Hot Rods & Custom Stuff, Todd Ryden, Aaron Leyda, Tyler Andrews-GearZ, Mike Losh, Greenspeed, Boise State University.

	ucts / Supporting The Sport2-{ arnesses
	Chassis Harnesses
	pplications
	zable Nostalgia All Black Chassis Harness 17 Circuits9 zable Chassis Harness - 18/21/28 Circuits9-
	zable Trunk Mount Chassis Harness - 21/28 Circuits
	zable Muscle Car Harness - 21/28 Circuits
	zable Pickup Chassis Harness - 21/28 Circuits
Ford	
	zable Ford Color Coded Chassis Harness - 21 Circuits
	stang Chassis Harness 1965-1970 - 22 Circuits27
	eries Truck Harness 1967-1977 - 21 Circuits
Ford Bro	nco Harness 1966-1977 - 28 Circuits
GM	
GM Mus	cle Car Chassis Harness 1969-1974 - 25 Circuits16
GM Chev	velle/Malibu Chassis Harness 1968-1969 - 26 Circuits17
GM Cam	aro/Firebird Chassis Harness 1967-68 - 24 Circuits18
GM Cam	aro Chassis Harness 1969 - 26 Circuits19
GM Cam	aro Harness 1970-1981 - 26 Circuits20
GM Tri-F	ive Chevy Chassis Harness 1955-1957 - 28 Circuits
	vy II/Nova Chassis Harness 1966-1967 - 21 Circuits
	up Truck Chassis Harness 1963-1966 - 19 Circuits
	up Truck Chassis Harness 1967-1972 - 28 Circuits
	up Truck Chassis Harness 1973-1987 - 27 Circuits
Jeep	
	Chassis Harness - 1986 and earlier
	Harness 1987-1991 - 23 Circuits
	cessories
Mopar	and a Manage Caller Carled Character University of City in
	zable Mopar Color Coded Chassis Harness - 21 Circuits25
Off-Road	zahla Waatharproof Chappin Harpege 26 Circuite
	zable Weatherproof Chassis Harness - 26 Circuits40 zable Extreme Off-Road Harness - 15 Circuits41
Race	Lable Extreme On-robat Hamess - 15 Oncours
	et Chassis Harness - 21 Circuits42
	et Chassis Harness - 21 Circuits
	ly Chassis Harness - 10 Circuits
	ly Chassis Harness w/Switch Panels - 10 Circuits
	ersal Engine Harness
	rness Accessories
	tion Harnesses
	uel Injection Harnesses
	Program
	mmins Cummins Diesel 5.9L - Manual Transmission Only 2003-2005
	Ford 5.0L 1986-1995
	I & Gen IV
	LS3, LS7, L99 Throttle by Wire 2006-201256
	IV 4.8-6.2L Throttle by Wire 2007-2012
	Throttle by Wire Harness 2005-200658
GM LS1	Throttle by Wire 1997-200459
GM LS1	LS6 Mechanical Throttle 1998-200260
GM Gen	III 4.8, 5.3 & 6.0L Throttle by Wire 1999-200661
GM Gen	III 4.8, 5.3 & 6.0L Mechanical Throttle 1999 & 200662
GM Gen	III & Gen IV Accessories63
GM LT1/L1	
GM LT1/	LT4 1992-199764
GM Early	
	ec - 5.0 & 5.7L V8 (CMFI) 1996-199965
	ec - 4.3L V6 (CMFI) 1996-199966
GM TPI/TE	
	V6; 5.0, 5.7 & 7.4L V8 TBI 1986-199367
	PI (MAF) 1985-1989
	PI (MAP) 1990-1992
	Accessories
	Chassis/Fuel Injection
	Integrated EFI/Chassis Harness Manual Throttle 1997-2004
	III 4.8L, 5.3L & 6.0L EFI/Chassis Harness Manual Throttle 1999-2006
-	anagement & Accessories
	System Management & Accessories
	rs
	ols - F5 Fan Controller
	ks
	ntroller
	Relay Kits & Upgrades
-	ectrical Accessories
	ntry/Start - Phantom Key Controller
	id & ClassicBraid Wire Loom
PowerBra	Relay Kits
	nels
Relays & I	
Relays & I Switch Pa	sion Controller - Perfect Torc
Relays & I Switch Pa Transmiss	sion Controller - Perfect Torc81
Relays & I Switch Pa Transmiss Trail Rock	

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## New Products



### INTRODUCING THE ALL NEW DIRECT FIT MUSCLE CAR HARNESSES



We are proud to announce our 26 circuit direct fit muscle car wiring harnesses for the Camaro and Chevelle! With virtually every connector installed on the harness out of the box, these kits give you everything you need for connecting the standard factory components as well as many aftermarket components. Designed to include the most common options for each vehicle, these kits will have your project on the road in no time.





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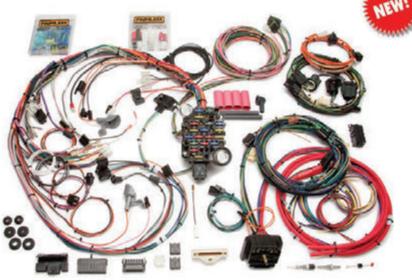
Temperature Gauge

Oil Gauge Tachometer

Voltmeter

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- Numerous components have the connectors and terminals pre-installed to make connections plug-n-play
- All exterior lights have the correct sockets and bulbs pre-installed
- 6 gauge charge wire and 150 amp MIDI fuse
- Fully integrated ground circuit
- 140+ page manual full of color schematics, photos, and step-by-step instructions



See Page 17

**Chevelle and Malibu Direct Fit Harnesses** 20128 - 26 Circuit, Direct fit Chevrolet Chevelle/Malibu Harness (1968) 20129 - 26 Circuit, Direct fit Chevrolet Chevelle/Malibu Harness (1969) (1970 -1972 coming soon)

# Includes Circuits For: AC / Heat

## /

## New Products

## INTRODUCING THE TRAIL ROCKER JEEP JK ACCESSORY CONTROL SYSTEM





(Automatic Transmission Applications Only) Introducing the brand new Trail Rocker from Painless, allowing you to control up to eight accessories on your JK Jeep! The

heart of this kit is enclosed in the waterproof housing that surrounds the power center with eight fuses and relays. Controlling it, are five prewired switches mounted in our custom dash panel for a clean factory installed look inside your Jeep. The power center then provides you with all the necessary weatherproof connectors and wiring to connect to your Jeep accessories ranging from lights to air lockers. Easily installed with our detailed instructions and plug-n-play design.

- Control up to 8 accessories, (8) 30 amp fuses and (8) 30 amp relays
- Weatherproof housing around the power center and connections
- Custom bolt-on powder coated bracket for the power center

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- Switch panel mounts 5 LED switches in a factory non-intrusive dash location
- Independent of the factory electrical system and won't void the factory warranty



pre-molded trailer connector, a charging system capable of handling up to 100 amp alternators, and a 140+ page manual full of color schematics, photos, and step-by-step instructions!

Oil Gauge

Tachometer - 6 & V8

Temperature Gauge Voltmeter

## New Products



**Includes New Bolt-In Replacement Battery Tray!** 

### 40126 - Jeep CJ DPM Dual Battery Kit See Page 39

This 500 amp Digital Power Manager & Custom Battery Tray provides you with a direct replacement battery tray integrated with our dual battery controller for your '76-86 CJ Jeep. The DPM is a 500AMP Jump Start & continuous duty cycle weatherproof solid state control unit. While the tray is a powder-coated drop in replacement.

### Jeep CJ DuraSpark II Ignition Harnesses See Page 39

#### 30812 - Jeep 4 Cylinder DuraSpark II Ignition Harness 30819 - Jeep 6 & 8 Cylinder DuraSpark II Ignition Harness

Perfect replacement for your Jeep Duraspark II ignition system. It allows for the factory location of your module and coil. This part is recommended if you are also replacing the chassis harness.

### 30717 - Jeep CJ Manifold Heater Relay Kit See Page 39

This simple plug-n-play kit allows a manifold heater to be used if you are rewiring your Jeep using a Painless chassis harness, using a later style manifold on an older Jeep, or if the factory relay was cut from your Jeep at some point in time.

### LS Coil Extension Harnesses See Page 63

Includes two pigtails to allow relocating coils off the valve covers. Factory color coded wires and weatherproof connectors. One drivers side, one passenger side pigtail. 60128 - 36" 60129 - 48" 60127 - 24" Also Available

#### 40122 - Digital Power Manager For Dual Battery Installations 500 Amp w/Jump Start w/16ft Battery Cables See Page 87

This Digital Power Manager is a true 500 AMP Jump Start and a 500 AMP Continuous Duty Cycle weatherproof solid state control unit that controls a high amperage solenoid to automatically combine a reserve battery when a large load is placed on a vehicles main battery.

(40123 - Digital Power Manager - Winch Relay Kit coming soon!)



#### New PowerBraid and ClassicBraid Display Packaging See Page 73 Introducing brand new packaging for our PowerBraid and ClassicBraid!

Coming to a store near you, our new designed box features a cut-away section that you can touch and feel the product before you buy it. Clean up your engine bay this weekend and protect your wiring with our braided loom.



### New Universal Harness Manuals

We are happy to announce that coming in 2015 you will find an all new manual for our universal kits. This manual is growing from a black and white 35 pages to over 100 pages of full color that outlines and follows an actual install step by step. Numerous full color diagrams and pictures document each step of the install and also covering different alternatives to things such as connecting to an EFI harness, converting to an aftermarket ignition system, upgrading to a newer alternator, installing aftermarket gauges, etc. All of this at no extra cost to the harness and available online free for download!



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## Supporting The Sport





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On any given weekend you're likely to find Painless exhibiting at a car show, drag race, off road event or other automotive happening near you. We believe it's important to support the industry and the hobby by keeping in close contact with our customers and talking with you one on one. Our technical engineers are on hand to answer all of your questions and help you choose the right Painless products for your needs or assist you in chasing down whatever electrical gremlins may be plaguing you. If we're in your area, be sure to stop by and say hello. Some of our best new product ideas come from our customers!



Along with keeping in close contact with our many customers, Painless is proud to be involved with many great groups in the automotive aftermarket industry. From major trade shows to local enthusiast events, Painless is there!



## Engineered To Be The Best



## Number One Selling Harnesses

Our customers know that installing one of our harnesses is truly a painless experience. Install just one Painless chassis harness and you'll be a customer for life. Yes, you can buy a cheaper harness, but why would you? The time and effort that goes into building a project vehicle should not be jeopardized by using an inferior electrical system. All wires are not created equal.

When it comes to the safety of your vehicle's electrical system, cutting corners when it comes to the wiring system is just not a good idea. With nearly a quarter century of experience and a quarter million harnesses on the road, Painless is the sensible solution to all your automotive wiring needs

Two important features make Painless the easiest wiring harnesses anywhere to install. First, we take the time during final assembly to group the wires by where they go in the vehicle. Depending on the application the average harness will have 15 to 18 different groups of wires – headlight section, taillight section, instrument section, ignition section, etc. – all wire-tied together. So instead of routing over 100 individual wires, you're just routing 15 or so sections. We put in the extra labor so you don't have to.

Painless only uses the highest quality TXL (Thermal Cross-Linked) wire. Why is this important to you? Well, TXL features an extra-thin walled insulation, making it the smallest and most lightweight wiring option. This also makes it the easiest wire to route; it won't kink and bind up on you in those hard to fit places like the inferior GPT wire is prone to do.

You also can't get a higher temperature rating with any other wire. TXL has a temperature range of -51C to 125C (-60F to 257F), enabling it to resist high engine compartment heat. The less costly, harder to route GPT wire is only rated at -40C to 80C (-40F to 176F).

Every wire in a Painless chassis harness has its function printed on it every few inches the entire length of the wire. We even go to the extent of using white ink on the darker colored wires and black ink on the lighter ones to ensure ease of reading. This makes installation and, should the need ever arise, troubleshooting a snap. Second, you don't need to have a degree in electrical engineering to install a Painless harness, nor do you have to know how to read a confusing wiring schematic. You just need to know how to read our straightforward instructions.





The nerve center of every Painless chassis harness are our premium quality, OEM-style fuse blocks. Featuring easy-to-find, blade-type fuses and clearly labeled circuits, these blocks will deliver years of trouble free service. Corrosion resistant terminals, solid mounting points, superior construction and compact design assure years of trouble free performance.



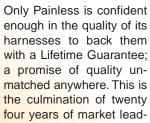
## Guaranteed For Life

## For The Best Reason: Quality!

Half the job is already done for you. Just mount the block and route the wires. This is the most important feature of a Painless chassis harness. How well the wiring is connected to the fuse block, how secure and permanent the connection, determines how well the entire system will perform. Every Painless chassis harness comes out of the box with the wiring already hand terminated to the fuse block. This assures you of a trouble-free performance that do-ityourself screw connections cannot match. You know you'll be completing your installation with quality components because the fuses, flashers, relays, wire ties and mounting brackets you need to do the job right are in the Painless chassis harness kit. (Components vary by application).



Even seasoned wiring pros have a question now and then and, if the answer is not in the comprehensive, step-by-step instruction manual that comes in each kit, it's nice to know that you're just a toll free call away from the most professional technical assistance help line in the industry.





ership, quality design and manufacturing innovations. It means you can share our confidence that when you install a Painless chassis or fuel injection harness, you're wiring your car with the very best there is... Guaranteed!



## Chassis Harnesses Choosing The Right Harness





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Over the past twenty five years we've seen other wiring harness manufacturers boast of offering "more circuits..." - 22 circuits or 24 circuits or 26 circuits. Or offering add-on circuit kits to beef up their product's value. But the fact is that unless you are an automotive engineer or electrical systems professional, the average car guy may not know how many circuits are really needed for his vehicle. And honestly, why should you buy more than is actually needed for the job? We have the solution.

We created our "Circuit-Match System" in this catalog to guide you to the perfect harness for your specific application. In many cases we offer harness kits engineered for a specific make and model application and that's all you'll need to complete the job. In other cases such as a modified vintage car or classic truck application you'll want a harness that allows some customization or future expansion of capabilities. And then there are more simple applications such as T-Buckets, rock crawlers or race cars where all you need is a simple 10 circuit system for basic electrical functions.

As you look through this catalog you will see blue check-off boxes on each harness page which list all the components and systems which are serviced by each harness application. If you're re-wiring a stock vehicle or are not changing the electrical components on your vehicle, just check off the list to confirm you have the right harness to service all the electrical components you have. If you are upgrading your vehicle with new systems or components such as air conditioning, power windows ora custom sound system, then find the harness which includes circuits for these additional components. It's a simple concept but it takes the guesswork out of choosing the right harness the first time!

If you've used our kits before, you already know how "Painless" we make wiring your vehicle. We want to make choosing the parts you need painless as well. Our staff here at Painless designed this catalog to do just that. If you flip to the back of this catalog, you will find a 'Project Build Sheet'. This sheet serves you as a checklist for the harness and other parts necessary to successfully wire your vehicle. If you find yourself with any questions please call our highly knowledgeable technical support staff to discuss which Painless Performance Products you need to do a professional wiring job on your project vehicle. We seriously want to hear from you to help you choose the right products for your projects.

Next we are going to discuss some of our key product terminologies you will come across throughout this catalog. To learn about all of the benefits and technology that goes into our chassis harnesses please reference pages 6 & 7.

Customizable Kits: These harnesses are available as either Classic or Classic-Plus giving the expandability and flexibility you may need to be creative with your project. The major difference between these are the "Classic-Plus" kits include provisions for you to add extra accessories you may want. Examples of these additional accessories might be: power windows, power door locks, a power antenna or maybe a 12 volt accessory port in your trunk to charge your cell phone. Customizable Kits range from "very adapt-able" to any vehicle or are available as more vehicle specific options. However, the more vehicle specific options still allow you the expandability to wire your vehicle how you want to for more accessories.

Classic Kits: This is the term we use to describe our 21 and fewer circuit kits. These kits feature everything needed to get you on the road and provide for some accessories, yet not as many as our Classic-Plus Kits.

Classic-Plus Kits: This is the term we use to describe our 28 circuit kits. These harnesses include everything the Classic series provide yet offer additional circuits for more power accessories.

Direct Fit Kits: These harnesses are custom-tailored to be vehicle specific, plug and play kits with all the circuits and connectors necessary to completely and painlessly wire your vehicle. They are not, however, simply factory replacements. We understand that many of you want to add some creature comforts such as air conditioning, high amperage alternators or other accessories that were not available as a factory option in your vehicle, so our engineers have designed these elements into our Direct Fit harnesses. See the harness kit specific to your vehicle for complete information on our additional circuits we have provided.

## Chassis Harnesses Customizable



This 18 Circuit Customizable Harness may be just what you need. Wiring harnesses just don't come any simpler than this. These compact harnesses have all the basic circuits to get you rolling in no time. Each of these harnesses is identical except for that the 10307 has longer wires (8ft longer in tail section & 7ft longer in headlight section) to take care of longer wheelbase vehicles.

10308 - 18 Circuit Customizable Chassis Harness 10307 - 18 Circuit Customizable Chassis Harness With Extra Length Wires



Includes Circuits For: Accessory Brake Lights Charging **Electric Choke Emergency Flashers** Fan Relay Activation Power **Fused Power Source** Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Radio/Clock (Constant & Switched) Starting Tail Lights Third Brake Light **Turn Signals** Wipers \* Including Wires For: Fuel Gauge Oil Gauge

This 17 circuit harness with all black wire insulation and color coded stripes on the wire can help your vehicle look clean and help blend your harness into the background of your vehicle. Are you looking for a very simple to install harness with the flexibility of the fuseblock to be installable anywhere on your vehicle? This harness' unique construction has two major sections: Power Supply Harness w/preterminated Fuse Block and the Output Supply Harness. This design allows for the fuse block to virtually be installed anywhere on your vehicle. This can be especially useful when building an earlier vehicle without a lot of room under it's dashboard. You'll also find many upgrades in this harness such as a 6 gauge charge wire and a 150 amp midi fuse. Included is a 100+ page color step-by-step instruction manual with many useful schematics for adding some of the most common aftermarket upgraded parts to your vehicle.

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10309 - 17 Circuit Customizable Nostalgia All Black Chassis Harness



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## Includes Circuits For:

Tachometer

Temperature Gauge Voltmeter



## Chassis Harnesses Classic Customizable



### Includes Circuits For:

A/C & Heat Accessory / Cigarette Lighter **Backup Lights** Brake Lights Charging Dome Light **Electric Choke Emergency Flashers** Fan Relay Activation Power Fused Power Source Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Radio/Clock (Constant & Switched) Starting Tail Lights Third Brake Light Turn Signals Wipers \* Including Wires For: Fuel Gauge Oil Gauge

Tachometer Temperature Gauge Voltmeter This 21 circuit kit is our most widely used customizable chassis harness. You'll find that it's easily adaptable to almost any vehicle. We offer two versions, one with a preterminated GM column mounted ignition switch connector and one without. Included with this harness are the following parts; a GM engineered fuse block & Painless mounting bracket; GM turn signal connectors; pre wired plugs for the headlights & dimmer switch; and each wire is printed with the circuit identification as well as using GM color codes for easy installation.

10101 - 21 Circuit Classic Customizable Chassis Harness - GM Keyed Column



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10102 - 21 Circuit Classic Customizable Chassis Harness - Non GM Keyed Column





#### See Page 73 For Info

### Painless Pro Solutions

**ClassicBraid & PowerBraid Wire Loom** Don't leave your wires unprotected! The easy to install split loom design is the perfect solution to clean up and protect the wiring in your vehicle. The ClassicBraid has a classic show car look similar to cloth. While the PowerBraid gives you a high performance nylon look.



## **Chassis Harnesses** Classic Plus Customizable



This 28 circuit kit includes most all the power accessory circuits you have been looking to add to your vehicle. The versatility of this harness will allow it to be easily adapted to almost any vehicle. It is available with or without the GM column mounted ignition switch connectors. Included with this harness are the following parts; a GM engineered fuse block & Painless mounting bracket; GM turn signal connectors; pre wired plugs for the headlights & dimmer switch; and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

10201 - 28 Circuit Classic-Plus Customizable Chassis Harness -GM Keyed Column



10202 - 28 Circuit Classic-Plus Customizable Chassis Harness - Non GM Keyed Column





See Page 90 For Info

### **Painless Pro Solutions** Ground Strap Kits

No matter the application, you're not going anywhere unless you've got good grounds! Bad grounds are the number one problem in automotive electrical issues. Eliminate those electrical gremlins with a new set of Painless ground straps today!

### Includes Circuits For: A/C & Heat Accessory Accessory / Cigarette Lighter Accessory / Trunk Light **Backup Lights** Brake Lights Charging **Cruise Control** Dome Light Electric Choke **Electric Fuel Pump Emergency Flashers** Fan Relay Activation Power **Fused Power Source** Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Power Antenna Power Door Locks **Power Windows** Radio/Clock (Constant & Switched)\* Starting Tail Lights Third Brake Light Turn Signals Wipers \* Including Wires For: Fuel Gauge Oil Gauge Speakers Tachometer Temperature Gauge

Voltmeter

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## Chassis Harnesses Classic Remote Mount





	Includes Circuits For:
Γ	A/C & Heat
Γ	Accessory
Γ	Backup Lights
Γ	Brake Lights
Γ	Charging CIRCUIT MATCH
٢	Dome Light
٢	Electric Choke
٢	Emergency Flashers
٢	Fan Relay Activation Power
٢	Fused Power Source
٢	Headlights
٢	Horn (Relay)
۲	Ignition Coil
٢	Instrument Panel Lighting & Gauges*
Γ	Park Lights
٢	Radio/Clock (Constant & Switched)
Γ	Starting
Γ	Tail Lights
٢	Third Brake Light
Γ	Turn Signals
۲	Wipers
٦	
	* Including Wires For: Fuel Gauge
	Oil Gauge
	Tachometer
	Temperature Gauge
	Voltmeter

This 21 circuit kit has extra long wires allowing you to mount the fuse block in a remote location such as in the trunk or behind the rear seat. This harness is highly adaptable to almost any vehicle. Included with this harness are the following parts; GM turn signal & column mounted ignition switch connectors; pre wired plugs for the headlights & dimmer switch; and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 10120 - 21 Circuit Classic Customizable Trunk Mount Chassis Harness





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See Page 76-80 For Info

### Painless Pro Solutions **Relay Kits**

Are you blowing fuses and melting switches? Using relays could be your answer. High amperage circuits are best utilized with one of our relay kits.

## Chassis Harnesses Classic-Plus Remote Mount



Are you looking to remote mount your fuse block and you want full power options? Then this 28 circuit kit will provide you with all those power accessory circuits, as well as extra long wires allowing you to mount the fuse block in a remote location such as in the trunk or behind the rear seat. Included with this harness are the following parts; GM turn signal & column mounted ignition switch connectors; pre wired plugs for the headlights & dimmer switch; and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 10220 - 28 Circuit Classic-Plus Customizable Trunk Mount Chassis Harness







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See Page 73 For Info

### Painless Pro Solutions

**ClassicBraid & PowerBraid Wire Loom** Don't leave your wires unprotected! The easy to install split loom design is the perfect solution to clean up and protect the wiring in your vehicle. The ClassicBraid has a classic show car look similar to cloth. While the PowerBraid gives you a high performance nylon look.



## Pro's Tip From Stacey David

'When remote mounting your battery, don't forget to upgrade your alternator and battery cables too"

See page 90 for remote cable kits

## Includes Circuits For:

A/C & Heat Accessory Accessory / Cigarette Lighter Accessory / Trunk Light Backup Lights **Brake Lights** Charging Cruise Control Dome Light Electric Choke **Electric Fuel Pump Emergency Flashers** Fan Relay Activation Power Fused Power Source Headlights Horn (Relay) **Ianition Coil** Instrument Panel Lighting & Gauges\* Park Lights Power Antenna Power Door Locks Power Windows Radio/Clock (Constant & Switched)\* Starting Tail Lights Third Brake Light **Turn Signals** Wipers \* Including Wires For: Fuel Gauge Oil Gauge Speakers Tachometer

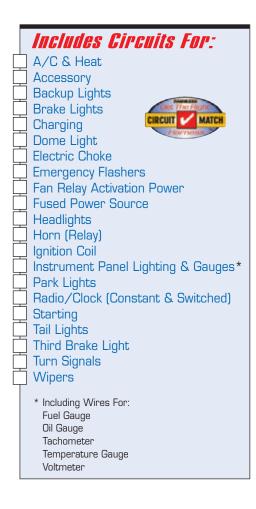
> Temperature Gauge Voltmeter

> > 13

## Chassis Harnesses Classic Muscle Car







This 21 circuit kit is adaptable to fit the 1960's, 70s, or 80s GM, Ford, and Chrysler muscle cars where a bulkhead connector is required. Some minor firewall/bulkhead modification may be required. Please be sure to check out all of our harnesses in this section, as we may have an offering for a more direct fit harness for your vehicle. Included with this harness are the following parts; GM turn signal & column mounted ignition switch connectors; pre wired plugs for the headlights & dimmer switch; and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 20103 - 21 Circuit Classic Customizable **Muscle Car Harness**





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See Page 90 For Info

### Painless Pro Solutions **Ground Strap Kits**

No matter the application, you're not going anywhere unless you've got good grounds! Bad grounds are the number one problem in automotive electrical issues. Eliminate those electrical gremlins with a new set of Painless ground straps today!



## Chassis Harnesses Classic-Plus Muscle Car



Do you have a 1960's, 70s, or 80s GM, Ford, or Chrysler muscle car that has power options or you're looking to add them? This 28 circuit kit will complete your project. It's adaptable to fit vehicles where a bulkhead connector is required. Some minor firewall/bulkhead modification may be required. Please be sure to check out all of our harnesses in this section, as we may have an offering for a more direct fit harness for your vehicle. Included with this harness are the following parts; GM turn signal & column mounted ignition switch connectors; pre wired plugs for the headlights & dimmer switch; and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 20104 - 28 Circuit Classic-Plus Customizable Muscle Car Harness







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See Page 76-80 For Info

### **Painless Pro Solutions** Relay Kits

Are you blowing fuses and melting switches? Using relays could be your answer. High amperage circuits are best utilized with one of our relay kits.

### Includes Circuits For:

A/C & Heat Accessory Accessory / Cigarette Lighter Accessory / Trunk Light **Backup Lights** Brake Lights Charging Cruise Control Dome Light Electric Choke Electric Fuel Pump **Emergency Flashers** Fan Relay Activation Power Fused Power Source Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Power Antenna Power Door Locks Power Windows Radio/Clock (Constant & Switched)\* Starting Tail Lights Third Brake Light Turn Signals Wipers \* Including Wires For: Fuel Gauge Oil Gauge Tachometer Temperature Gauge Voltmeter

15

## Chassis Harnesses Customizable 1969-74 GM Muscle car



### Includes Circuits For:

A/C & Heat Accessory / Cigarette Lighter Accessory / Trunk Light Backup Lights **Brake Lights** Charging Dome & Courtesy Lights **Electric Choke Electric Fuel Pump** Emergency Flashers Fan Relay Activation Power Fused Power Source Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Power Door Locks Power Windows Radio/Clock (Constant & Switched)\* Starting Tail Lights & License Plate Light Third Brake Light **Turn Signals** Wipers & Washer Pump

\* Including Wires For: Cigarette Lighter Light Brake Warning Light Fuel Gauge Generator Light Oil Gauge Speakers Tachometer Temperature Gauge Voltmeter



This 25 circuit harness was designed to fit 1969-1974 GM muscle cars. This harness features a pre-wired factory style bulkhead connector that plugs directly into the back of the fuse block in the factory location. Factory original quick connect terminals are included for the in dash printed circuit board. Pre-terminated plugs for a column mounted ignition switch, dimmer switch, headlights & headlight switch, blower motor, wiper motor, and turn signal switch. Included with this harness you'll also find a detailed manual and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

### 20102 - 25 Circuit Classic-Plus Customizable 1969-74 GM Muscle Car Chassis Harness



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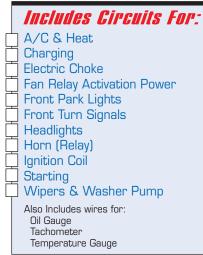
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### **Replacement Engine Harness**

11 circuit for underhood section of Painless GM chassis harness 20102. Does not include the bulkhead connector. Note: Will not fit factory GM harness. **21001 - only for 20101** 







## Chassis Harnesses Direct Fit 1968-69 Chevelle/Malibu



This harness give you everything you need and more! Not only are there provisions for connecting standard factory components, we also provide what you will need for aftermarket components. Including options like a console sub-harness, two gauge cluster pigtails, and even a fully integrated ground circuit. These harnesses follow all of the same routing found on the factory harness which allows you to utilize the factory harness attachment points. Extra length has even been added to even allow the headlight section to be routed behind the driver side inner fender for a cleaner look. Also included is a 140+ page manual full of color schematics, photos, and step-by-step instructions!

- Numerous components have the connectors and terminals pre-installed to make connections plug-n-play
- All exterior lights have the correct sockets and bulbs pre-installed
- 6 gauge charge wire and 150 amp MIDI fuse
- Fully integrated ground circuit
- 150+ page manual full of color schematics, photos, and step-by-step instructions

**Note:** Options not supported in these harnesses are: wiring for the TCS relay for turbo 400 transmissions, wiring for the factory power window/locks, and factory A/C wiring. These harnesses do include the switch power wire for the factory power window/locks and A/C. These harnesses do include a new blower motor harness for those with heat only systems.

20128 - 26 Circuit Direct Fit 1968 Chevrolet Chevelle/Malibu Harness 20129 - 26 Circuit Direct Fit 1969 Chevrolet Chevelle/Malibu Harness

(20130 - 1970 - 1972 coming soon)

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Includes Circuits For: AC / Heat Accessory Accessory / Cigarette Lighter Backup Lights Brake Lights Charging Courtesy & Dome Light **Electric Choke** Electric Fuel Pump **Emergency Flashers Fused Power Source** Glove Box Light **Headlights** Horn (Relay) **Ignition Coil** Instrument Panel Lighting & Gauges\* Park Lights Power Door Locks **Power Windows** Radio/Clock (Constant & Switched) Starting Tail Lights & License Plate Light Trunk Light **Turn Signals** Under Hood Light Wipers and Washer Pump \* Including Wires For: Aftermarket Gauge Power Ammeter Brake Warning Light Fuel Gauge Gear Indicator Light Oil Gauge Tachometer **Temperature Gauge** Voltmeter

## Chassis Harnesses Customizable 1967-68 Camaro/Firebird





American Made American Proud



### Includes Circuits For:

A/C & Heat Accessory / Cigarette Lighter Accessory / Trunk Light **Backup Lights** Brake Lights Charging Dome & Courtesy Lights Electric Choke **Electric Fuel Pump Emergency Flashers** Fan Relay Activation Power Fused Power Source Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Power Door Locks Power Windows Radio/Clock (Constant & Switched)\* Starting Tail Lights & License Plate Light Third Brake Light Turn Signals Wipers & Washer Pump \* Including Wires For:

Cigarette Lighter Light Brake Warning Light Fuel Gauge Generator Light Oil Gauge Speakers Tachometer Temperature Gauge Voltmeter





This 24 circuit harness is designed for the 1967 and 1968 Camaro & Firebird. It uses a '69 and newer style bulkhead connector design along with blade fuses and enough circuits to wire up just about any installed upgrade to your 1st generation F-body. Some minor firewall/bulkhead modification required. Factory original quick connect terminals are included for the in dash printed circuit board. Pre-terminated plugs for a dimmer switch, headlights & headlight switch, blower motor, wiper motor, and turn signal switch. Included with this harness you'll also find a detailed manual and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 20101 - 24 Circuit Classic-Plus Customizable 1967-68 Camaro/Firebird Harness



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### **Replacement Engine Harness**

10 circuit for underhood section of Painless GM chassis harness 20101. Does not include the bulkhead connector. Note: Will not fit factory GM harness.

21000 - only for 20101

## Includes Circuits For:

A/C & Heat Charging Fan Relay Activation Power Front Park Lights Front Turn Signals Headlights Horn (Relay) Ignition Coil Starting Wipers & Washer Pump

Also Includes wires for: Oil Gauge Tachometer Temperature Gauge



Headlight Door Harness 1967 Camaro headlight door harness. Designed specifically for the 1967 RS. Required when installing a 20101 in your '67 RS Camaro. 30818

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## Chassis Harnesses Direct Fit 1969 Camaro



Your most complete '69 Camaro Harness! Featuring 26 circuits with virtually every connector installed on the harness out of the box. This harness covers all common options and even features a fully integrated ground circuit. Included are provisions for the RS headlights and taillights, cowl hood, and even a complete console harness! All standard indicator lights have been replaced with color accurate LEDs. Installing the harness is made clear with an included 140+ page manual full of color schematics, photos, and step-by-step instructions!

- Numerous components have the connectors and terminals pre-installed to make connections plug-n-play
- All exterior lights have the correct sockets and bulbs pre-installed
- 6 gauge charge wire and 150 amp MIDI fuse
- Fully integrated ground circuit

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O BACKUP

■ 150+ page manual full of color schematics, photos, and step-by-step instructions

20202 - 26 Circuit Direct Fit **1969 Camaro Harness** 

(20203 - 1967 - 1968 Direct Fit coming soon)





## Includes Circuits For-

Accessory Accessory / Cigarette Lighter Accessory / RS/SS Headlight Covers **Backup Lights Blower Motor Brake Lights** Charging Courtesy & Dome Light **Electric Choke Electric Fuel Pump Emergency Flashers Fused Power Source Glove Box Light Headlights** Horn (Relay) **Ignition Coil** Instrument Panel Lighting & Gauges\* Park Lights **Power Door Locks Power Windows** Radio/Clock (Constant & Switched) Starting Tail Lights & License Plate Light **Turn Signals** Wipers and Washer Pump \* Including Wires For: Aftermarket Gauge Power Brake Warning Light Fuel Gauge Gear Indicator Light

Oil Gauge Tachometer Temperature Gauge Voltmeter

## **Chassis Harnesses** Direct Fit 1970-81 Camaro



## Includes Gircuits For:

		Accessory
		Accessory / Cigarette Lighter
		Backup Lights
		Blower Motor
		Brake Lights
		Charging
		Courtesy & Dome Light
	٦	Electric Choke
	٦	Electric Fuel Pump
	٦	Emergency Flashers
	٦	Fused Power Source
		Glove Box Light
		Headlights
	٦	Horn (Relay)
		Ignition Coil
1	٦	Instrument Panel Lighting & Gauges
		Park Lights
		Power Door Locks
	٦	Power Windows
	٦	Radio/Clock (Constant & Switched)
	٦	Seat Belt Lights
	٦	Starting
1	5	Tail Lights & License Plate Light
1	5	Turn Signals
1	5	Under Hood Light
1	5	Wipers and Washer Pump
I		
		* Including Wires For:
		Aftermarket Gauge Power

Aftermarket Gauge Powe Brake Warning Light Fuel Gauge Gear Indicator Light Key Buzzer Oil Gauge Tachometer Temperature Gauge Voltmeter



These 26 circuit Direct Fit 2nd Gen Camaro harnesses have virtually every connector installed on the harness out of the box. These harnesses are split into three sections (engine, interior, & rear) and features a fully integrated ground circuit. You'll find many upgrades in these harnesses such as a 4 gauge charge wire and a 150 amp midi fuse. Included is a 150+ page full color step by step manual that also covers many alternative wiring options and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

**NOTE:** Factory A/C wiring is not included, as this option seemed to almost change year to year. These harnesses do include the power wire for the A/C switch to make it as easy as plugging in your original A/C harness, an aftermarket reproduction harness, or an aftermarket A/C system. These harnesses do include a new blower motor harness for those with heat only systems.

- 20112 26 Circuit Direct Fit 1970-73 Camaro Harness 20113 - 26 Circuit Direct Fit
- 1974-77 Camaro Harness
- 20114 26 Circuit Direct Fit 1978-81 Camaro Harness







## Chassis Harnesses Direct Fit 1970-81 Camaro



#### Gen II Camaro Power Window & Door Lock Harness

Second Gen Camaros can have major window and door lock issues from inferior original wiring. We've included additional relays to save your switches, all new premium connectors and hi-temp wiring for maximum reliability. GM color coded, direct plug-in.

#### 30715 - 1970-81 Camaro Power Window and Door Lock Sub-Harness

#### PowerBraid & ClassicBraid Wire Loom Kits

Finish the installation job right with our complete Power-Braid or ClassicBraid kit for use with any of the following 2nd gen Camaro harnesses: 20112, 20113, or 20114. Contains all the appropriate diameter wire wrap, ties, and tape. **See page 73** for our full line of PowerBraid and ClassicBraid.

**70923 -** PowerBraid 2nd GEN Camaro Kit Includes: 41' of 1/8", 70' of ¼", 33' of ½", 2' of ¾", 2' of 1" (for harness part #'s 20112/20113/20114)

**70973 -** ClassicBraid 2nd GEN Camaro Kit Includes: 41' of 1/8", 70' of ¼", 33' of ½", 2' of ¾", 2' of 1" (for harness part #'s 20112/20113/20114)





#### Universal ground strap kits:

4 Piece kit includes (1) 14" 1/0 heavy duty ground strap, (3) 11" 10 gauge ground straps and self tapping screws. **40140** 

Single 1/0 heavy duty 14" ground strap. **40141** 

Single 10 gauge heavy duty 11" ground strap and (2) 1/4 self tapping screws for mounting. **40142** 



## Chassis Harnesses Classic Tri-Five Chevy





This 21 circuit kit is designed to fit the 1955-1957 "Tri-Five Chevy". This harness features a factory location Painless mounting plate for the fuse block, and special dash & turn signal connectors. Included with this harness you will also find pre wired plugs for the headlights and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

20107 - 21 Circuit Classic Tri-Five Chevy Chassis Harness

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American Proud







## Chassis Harnesses Classic-Plus Tri-Five Chevy



This 28 circuit kit is designed to fit the 1955-1957 "Tri-Five Chevy" and includes additional circuits for power options and accessories. This harness features a factory location Painless mounting plate for the fuse block, and special dash & turn signal connectors. Included with this harness you will also find pre wired plugs for the headlights and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

20106 - 28 Circuit Classic-Plus Tri-Five Chevy Chassis Harness







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### Pro's Tip From Randy Clark

"One of the most common items overlooked in automotive wiring is having insufficient chassis and body grounds."

See page 90 for our ground straps kits

### Includes Gircuits For: A/C & Heat Accessory Accessory / Cigarette Lighter Accessory / Trunk Light Backup Lights Brake Lights Charging Cruise Control Dome Light **Electric Choke** Electric Fuel Pump **Emergency Flashers** Fan Relay Activation Power Fused Power Source Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Power Antenna Power Door Locks Power Windows Radio/Clock (Constant & Switched)\* Starting Tail Lights Third Brake Light Turn Signals Wipers \* Including Wires For: Fuel Gauge Oil Gauge Speakers Tachometer Temperature Gauge Voltmeter

## Chassis Harnesses Customizable 1966-67 Chevy II / Nova



Includes Gircuits For: A/C & Heat Accessory / Cigarette Lighter Backup Lights Brake Lights Charging Dome Light Electric Choke Emergency Flashers Fan Relay Activation Power Fused Power Source Glove Box Light Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Radio/Clock (Constant & Switched) Starting Tail Lights & License Plate Light Turn Signals Wipers \* Including Wires For: Brake Warning Light Charge Light Fuel Gauge Oil Gauge Tachometer Temperature Gauge

This 21 circuit Customizable Chevy II/Nova harness has many of the factory connectors already installed on the harness out of the box. Including: the headlight connectors & switch, fuel gauge connnector, dimmer switch, brake switch, heater switch, blower resistor, wiper switch, backup switch, horn, dash light sockets, and warning light sockets. This harness is split into three sections (engine, interior, & rear) for easy installation and troubleshooting. You'll also find in this kit a harness for the factory air, a high output alternator pigtail with the connector installed, two door jam switches, 12 instrument panel light bulbs, eight harness mounting clamps, a custom Painless mounting plate for the fuse block, and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

20110 - 21 Circuit Direct Fit 1966-67 Chevy II/Nova Chassis Harness



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### Painless Pro Solutions

GM Column Installation Kit

Are you looking to put an aftermarket column in your vehicle? This kit has all the plugs and terminals for using a GM keyed aftermarket steering column. It contains two ignition switch connectors, two turn signal connectors and one dimmer switch connector and terminals for each.



## Chassis Harnesses Customizable Mopar Color Coded



This customizable 21 circuit harness can be used in almost any application where you want Mopar color coded wires. This harness eliminates the troublesome bulkhead connector, and uses our unique covered micro-fuse block. Also featured is an auxiliary circuit with a 20 amp relay for accessories such as fog lights, or an electric fuel pump. Each wire is custom printed with the circuit identification as well as using Mopar color codes for easy installation.

10127 - 21 Circuit Customizable Mopar Color Coded Chassis Harness



### **Painless Pro Solutions** GM Column Installation Kit

Are you looking to put an aftermarket column in your vehicle? This kit has all the plugs and terminals for using a GM keyed aftermarket steering column. It contains two ignition switch connectors, two turn signal connectors and one dimmer switch connector and terminals for each.



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### Pro's Tip From Stacey David

"If you're going to make the investment in a high quality chassis harness, make the choice to protect it with the highest quality loom."

**See page 73** for our PowerBraid and ClassicBraid wire loom



Voltmeter



## Chassis Harnesses Customizable Ford Color Coded





Fan Relay Activation Power
Fused Power Source
Headlights
Horn (Relay)
Ignition Coil
Instrument Panel Lighting & Gauges\*
Park Lights
Radio/Clock (Constant & Switched)
Starting
Tail Lights & License Plate Light
Third Brake Light
Turn Signals
Wipers
\* Including Wires For: Brake Warning Light

Brake Warning Light Fuel Gauge Gear Indicator Light Oil Gauge Tachometer Temperature Gauge Voltmeter



This customizable 21 circuit harness can be used in almost any application where you want Ford color coded wires. This harness uses our unique covered micro-fuse block. Also featured is an auxiliary circuit with 20 amp relay for accessories such as fog lights, or an electric fuel pump. Each wire is custom printed with the circuit identification as well as using Ford color codes for easy installation.

10123 - 21 Circuit Customizable Ford Color Coded Chassis Harness



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#### Ford 3G Alternator Wiring Kit

Contains everything needed to connect to a 3G alternator: 8' of 6 gauge charge wire, pre-terminated harness with the correct connectors, 150 amp inline fuse, an assortment of weather proof splices, and detailed color instructions. **30831** 



30806 Installation Kit

### **Painless Pro Solutions** GM Column Installation Kit

Are you looking to put an aftermarket column in your vehicle? This kit has all the plugs and terminals for using a GM keyed aftermarket steering column. It contains two ignition switch connectors, two turn signal connectors and one dimmer switch connector and terminals for each.



## Chassis Harnesses Direct Fit 1965-70 Mustang



These 22 circuit direct fit 1965-1970 Mustang harnesses have many of the factory connectors already installed on the harness out of the box. These harnesses use our unique covered micro-fuse block. Also featured is an auxiliary circuit with 20 amp relay for accessories such as fog lights, or an electric fuel pump. Each wire is custom printed with the circuit identification as well as using Ford color codes for easy installation.

20120 - 22 Circuit Direct Fit

1965-66 Mustang Chassis Harness

- 20121 22 Circuit Direct Fit 1967-68 Mustang Chassis Harness
- 20122 22 Circuit Direct Fit 1969-70 Mustang Chassis Harness



#### **Duraspark II Harness**

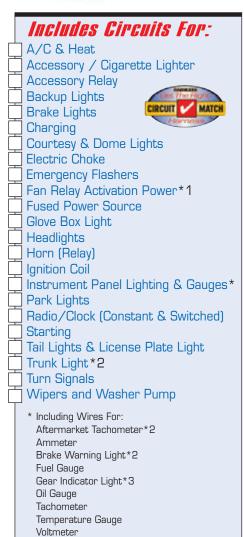
Upgrade from your old points type ignition to a Duraspark II electronic ignition system with this plug-in harness. **30812** 



30806 Installation Kit

## Painless Pro Solutions

**GM Column Installation Kit** Are you looking to put an aftermarket column in your vehicle? This kit has all the plugs and terminals for using a GM keyed aftermarket steering column. It contains two ignition switch connectors, two turn signal connectors and one dimmer switch connector and terminals for each.



- 1. Only available on 20120
- 2. Only available on 20121 and 20122
- 3. Only available on 20122

## Chassis Harnesses Classic Customizable Pickup



### Includes Circuits For: A/C & Heat Accessory / Cigarette Lighter Backup Lights Brake Lights Charging Dome Light **Electric Choke Emergency Flashers** Fan Relay Activation Power **Fused Power Source** Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Radio/Clock (Constant & Switched) Starting Tail Lights Third Brake Light **Turn Signals** Wipers \* Including Wires For: Fuel Gauge Oil Gauge Tachometer Temperature Gauge Voltmeter

American Made

This is our customizable 21 circuit pickup chassis harness. You'll find that the ample wire lengths make this kit especially suited for trucks with long beds and extended cabs. We offer two versions, one with the GM column mounted ignition switch connector and one without. Included with this harness are the following parts; a GM engineered fuse block & Painless mounting bracket; GM turn signal connectors; pre wired plugs for the headlights & dimmer switch; and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

### 10103 - 21 Circuit Classic Customizable Pickup Chassis Harness -GM Keyed Column



10104 - 21 Circuit Classic Customizable Pickup Chassis Harness - Non GM Keyed Column





## Pro's Tip From Stacey David

"Don't just upgrade a fuse when adding more accessoies to a circuit. You'll want to use one of the Painless auxiliary circuit blocks."

See page 92 for more information



## Chassis Harnesses Classic-Plus Customizable Pickup



This 28 circuit kit will provide you with all those power accessory circuits you have been looking to add to your pickup chassis. You'll find that the ample wire lengths make this kit especially suited for trucks with long beds and extended cabs. It is available with or without the GM column mounted ignition switch connector. Included with this harness are the following parts; a GM engineered fuse block & Painless mounting bracket; GM turn signal connectors; pre wired plugs for the headlights & dimmer switch; and each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 10203 - 28 Circuit Classic-Plus Customizable Pickup Chassis Harness -GM Keyed Column



10204 - 28 Circuit Classic-Plus Customizable Pickup Chassis Harness -Non GM Keyed Column



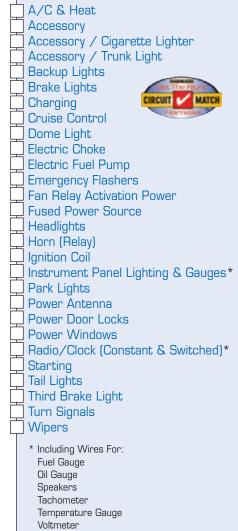


See Page 73 For Info

## Painless Pro Solutions

**ClassicBraid & PowerBraid Wire Loom** Don't leave your wires unprotected! The easy to install split loom design is the perfect solution to clean up and protect the wiring in your vehicle. The ClassicBraid has a classic show car look similar to cloth. While the PowerBraid gives you a high performance nylon look.

## Includes Circuits For:



29

## Chassis Harnesses Customizable 1963-66 GMC/Chevy Pickup





### Includes Circuits For: A/C & Heat Accessory / Four Wheel Drive Switch **Brake Lights** Charging Dome Light Electric Choke **Emergency Flashers** Fan Relay Activation Power **Fused Power Source** Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Radio/Clock (Constant & Switched) Starting Tail Lights & License Plate Light Turn Signals Wipers \* Including Wires For: Fuel Gauge Cab and Tank Generator Light **Oil Gauge**

Temperature Gauge



This 19 circuit 1963-1966 GMC/Chevy Pickup harness has many of the factory connectors already installed on the harness out of the box. Including: the headlight connectors & switch, dimmer switch, brake switch, wiper motor & switch, horn, dash light sockets & bulbs, and warning light sockets. This harness will work with single and dual dash turn signal indicators. Each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 10112 - 19 Circuit Classic Customizable 1963-66 GMC/Chevy Pickup Harness



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**30806 Installation Kit** 

Painless Pro Solutions **GM Column Installation Kit** 

Are you looking to put an aftermarket column in your vehicle? This kit has all the plugs and terminals for using a GM keyed aftermarket steering column. It contains two ignition switch connectors, two turn signal connectors and one dimmer switch connector and terminals for each.



## Chassis Harnesses Customizable 1967-72 Chevy Pickup



This 28 circuit 1967-1972 GMC/Chevy harness was designed to fit trucks, Blazers, and Suburbans. It features a factory style bulkhead connector and has many of the factory connectors already installed on the harness out of the box. Including: the headlight connectors & switch, dimmer switch, wiper motor, ignition switch, blower motor & switch, blower resistor, and instrument cluster. Each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 10206 - 28 Circuit Classic-Plus Customizable 1967-72 GM Pickup Truck Chassis Harness



GM Truck Courtesy Light Kit For 1967-72 Chevy/GMC trucks. 30708

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#### Chevy A/C Harness

For 1967-72 designed to replace factory harness for the A/C/Heat system. **30901** 

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	Includes Circuits For:
	A/C & Heat
	Accessory / Camper Cover Light
-	Accessory / Cigarette Lighter
-	Accessory / Four Wheel Drive
_	Switch
-	
_	Backup Lights
_	Brake Lights
	Charging
	Cruise Control
	Dome Light
_	Electric Choke
_	Electric Fuel Pump
	Emergency Flashers
	Fan Relay Activation Power
	Fused Power Source
	Headlights
	Horn (Relay)
	Ignition Coil
	Instrument Panel Lighting & Gauges*
_	Park Lights
-	Power Antenna
-	Power Door Locks
_	Power Windows
	Radio/Clock (Constant & Switched)
_	Starting
	Tail Lights
_	Third Brake Light
	] Turn Signals
	Wipers and Washer Pump
	* Including Wires For:
	Ammeter
	Brake Warning Light
	Four Wheel Drive Light
	Fuel Gauge
	Generator Light Oil Gauge
	Tachometer
	Temperature Gauge
L	

## **Chassis Harnesses** Customizable 1973-87 GM Pickup Truck



### Includes Circuits For: A/C & Heat

Accessory / Camper Cover Light Accessory / Cigarette Lighter Accessory / Four Wheel Drive Switch **Backup Lights Brake Lights** CIRCUIT Charging **Cruise Control Dome & Courtesy Lights Electric Choke** Electric Fuel Pump **Emergency Flashers** Fan Relay Activation Power **Fused Power Source** Headlights Horn (Relay) **Ignition Coil** Instrument Panel Lighting & Gauges\* Park Lights Power Door Locks **Power Windows** Radio/Clock (Constant & Switched)\* Starting **Tail Lights** Third Brake Light **Turn Signals** Wipers & Washer Pump \* Including Wires For: Brake Warning Light Four Wheel Drive Light Fuel Gauge

This 27 circuit 1973-1987 GMC/Chevy harness was designed to fit trucks, Blazers, and Suburbans. It features a factory style bulkhead connector and has many of the factory connectors already installed on the harness out of the box. Including: the headlight connectors & switch, dimmer switch, wiper motor, ignition switch, blower motor & switch, blower resistor, and instrument cluster. Each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 10205 - 27 Circuit Classic-Plus Customizable 1973-87 GM Pickup Truck Chassis Harness







## Pro's Tip From Randy Clark

"Never use wire nuts when wiring anything except your home. Even the tightest wire nuts will tend to loosen up over time leading to a possiblility of a fire."



GRNIVAT



Oil Gauge

Speakers

Tachometer

Temperature Gauge

## Chassis Harnesses Direct Fit 1967-77 F-Series Ford Truck



These 21 circuit direct fit 1967 - 1977 Ford F-Series Ford truck harness are the perfect upgrade. They use many of the factory connections that are already preterminated. Also featured is our unique covered micro-fuse block with a 20 amp auxiliary relay circuit for accessories such as fog lights, or an electric fuel pump. Included in the 10118 kit are brand new headlight, ignition, dimmer, wiper and brake switches. Each wire is custom printed with the circuit identification as well as using Ford color codes for easy installation.

### 10117 - 21 Circuit Direct Fit 1967-77 F-Series Ford Truck Harness without Switches

10118 - 21 Circuit Direct Fit 1967-77 F-Series Ford Truck Harness with Switches



#### **Duraspark II Harness**

Upgrade from your old points type ignition to a Duraspark II electronic ignition system with this plug-in harness. **30812** 



### Ford 3G Alternator Wiring Kit

Contains everything needed to connect to a 3G alternator: 8' of 6 gauge charge wire, pre-terminated harness with the correct connectors, 150 amp inline fuse, an assortment of weather proof splices, and detailed color instructions. **30831** 

### Includes Circuits For: A/C & Heat Accessory (Relayed) Accessory / Cigarette Lighter **Backup Lights** Brake Lights Cargo Lamp Charging Dome Light Electric Choke Emergency Flashers **Fused Power Source** Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Radio/Clock (Constant & Switched) Starting Tail Lights and License Plate Light **Turn Signals** Wipers & Washer Pump \* Including Wires For: Ammeter Brake Warning Light Four Wheel Drive Light Fuel Gauge Oil Gauge Tachometer Temperature Gauge

## Chassis Harnesses Direct Fit 1966-77 Bronco



Designed with input from Bronco owners everywhere, this 28 circuit direct fit

1966-1977 Bronco harness sets a new standard in wiring. This harness includes a molded plastic glove box that not only replaces the factory cardboard one, it

also mounts our weatherproof fuse block. You'll also find factory-style molded

exterior light connectors, Ford turn signal connectors and a Ford dimmer switch

connector. This harness has most of the factory connections already pre-termi-

nated. The kit includes new wiper, headlight and ignition switches. Also included

is an 80+ page full color step by step install manual with over 80 photos, draw-

ings and harness schematics. Each wire is custom printed with the circuit iden-

tification as well as using Ford color codes for easy installation.

1966-77 Bronco Harness with switches

1966-77 Bronco Harness without switches

### Includes Circuits For:



Aftermarket Tachometer Ammeter Brake Warning Light Fuel Gauge Fuel Tank Switch Gear Indicator Light Oil Gauge Temperature Gauge Voltmeter Upgrade from your old points type ignition to a Duraspark II electronic ignition system with this plug-in harness.
 30812
 Ford 3G Alternator Wiring Kit

10113 - 28 Circuit Direct Fit

10114 - 28 Circuit Direct Fit

**Duraspark II Harness** 

#### Contains everything needed to connect to a 3G alternator: 8' of 6 gauge charge wire, pre-terminated harness with the correct connectors, 150 amp inline fuse, an assortment of weather proof splices, and detailed color instructions. **30831**

PowerBraid Bronco Kit Wire loom set to cover our Bronco chassis harness 10113 70922











# Chassis Harnesses Customizable 1975 & Earlier Jeep CJ



This 22 circuit factory upgrade harness for 1975 & earlier CJ Jeeps uses the OEM style fuse block. Open ended wire leads allow for custom routing of wires. This harness routes the wires through a grommet in the bulkhead and the ignition switch is in the dash. Also included are pre-wired plugs for headlights. Each wire is custom printed with the circuit identification as well as using factory color codes for easy installation.

10105 - 22 Circuit Classic Customizable 1975 & Earlier Jeep CJ Harness





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See Page 90 For Info

#### Painless Pro Solutions **Ground Strap Kits**

No matter the application, you're not going anywhere unless you've got good grounds! Bad grounds are the number one problem in automotive electrical issues. Eliminate those electrical gremlins with a new set of Painless ground straps today!

### Includes Circuits For:





# Chassis Harnesses Customizable 1976-86 Jeep CJ



Includes Gircuits For: A/C & Heat Accessory / Cigarette Lighter **Backup Lights** Brake Lights Charging RCUIT Dome Light **Electric Choke Emergency Flashers** Fan Relay Activation Power **Fused Power Source** Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Radio/Clock (Constant & Switched) Starting Tail Lights Third Brake Light **Turn Signals** Under Hood Light Wipers \* Including Wires For: Emergency Brake Light Four Wheel Drive Light Fuel Gauge Oil Gauge Tachometer Temperature Gauge Voltmeter

This 22 circuit factory upgrade for 1976-86 CJ Jeeps uses the OEM style fuse block. Open ended wire leads allow for custom routing of wires. This harness is designed to be a customizable kit. This harness routes the wires through a bulkhead connector and the ignition switch is in the column. This kit includes GM column mounted ignition switch connectors and a GM column mounted turn signal switch connector pre-terminated and ready to install. Also included are pre-wired plugs for headlights and the dimmer switch. Each wire is custom printed with the circuit identification as well as using factory color codes for easy installation.

If you are looking for a more direct fit please see Painless kit #10110.

10106 - 22 Circuit Classic Customizable 1976-86 Jeep CJ Harness





# Chassis Harnesses Direct Fit Jeep 1976-86 CJ



This is our completely overhauled 21 circuit direct fit harness for 1976 to 1986 CJ Series Jeeps. Like your Jeep, this harness has undergone a "frame off restoration". We took our best-selling direct fit harness, read about any issues or problems our customers were having with them over the years and addressed each and every single solitary issue with it. Now, included in this brand new harness is a fully integrated ground circuit for every electrical component on these Jeeps. This is a critical addition for those of you with fiberglass bodies or those who might mistake mud as a good conductor. We've also added numerous connections and connectors to the harness including a pre-molded trailer connector, a charging system capable of handling up to 100 amp alternators and custom factory style molded taillight housing connectors. One of the biggest improvement to this harness kit is our all new full color instruction manual. This manual provides 140+ pages of color schematics, photos and step-by-step instructions to wiring your CJ from headlight to taillight and covers most popular aftermarket add-ons as well. The blade-type fuse block wiring are machine crimped with factory style terminals. Each wire is printed with its circuit identification as well as using factory color codes for easy installation. NOTE: Harness #10150 is not equipped for computer controls nor is it engine specific.

#### 10150 - 21 Circuit Direct Fit Jeep CJ Harness



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	Includes Circuits For:
Ļ	A/C & Heat
L	Accessory / Cigarette Lighter
L	Backup Lights
	Brake Lights
Γ	Charging CIPCIIIT CALATER
Γ	Dome Light
۲	Electric Choke
F	Emergency Flashers
Fused Power Source	
-	
F	Headlights
Ļ	Horn (Relay)
L	Ignition Coil
L	Instrument Panel Lighting & Gauges*
	Park Lights
Г	Radio/Clock (Constant & Switched)
Γ	Relay Activation / Accessory Power
Γ	
7	
2	
þ	
Ļ	
Ц	vvipers & vvasner Pump
	* Including Wires For:
	Brake Warning Light
	Clock
	000
	0
	0
	Tachometer - 6 & V8
	Park Lights Radio/Clock (Constant & Switched) Relay Activation / Accessory Power Starting Tail Lights and Trailer Lights Turn Signals Under Hood Light Wipers & Washer Pump * Including Wires For: Brake Warning Light Clock Dash Label Lighting Four Wheel Drive Light/Indicator Fuel Gauge Gear Indicator Light Oil Gauge

Temperature Gauge Voltmeter

# Chassis Harnesses Direct Fit Jeep 1987-91 YJ





This 23 circuit direct fit harness for 1987 to 1991 YJ Jeeps features a factory-style bulkhead connector that mounts the fuse block in the OEM location. This harness includes all the connectors and terminals needed. Included in this kit you will find a detailed manual and all of the wires are factory color coded and labeled for an easy install. NOTE: Factory EFI and emissions ICM are not supported.

10111 - 23 Circuit Direct Fit Jeep YJ Harness



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# Chassis Harnesses Jeep Accessories

## Hi-Velocity Jeep Throttle Bodies



Designed for 1991-06 Jeep 4.0L engines, these new throttle bodies from Painless offer improved horsepower and performance. Most stock Jeep throttle bodies are 55.5 mm at the outlet and 2.5" at the inlet and flow approximately 400 CFM. This severely restricts potential power gains from other engine modifications.

65300 PERFECT 600 cfm Hi-Velocity 62mm 1991-04 Jeep 4.0L Throttle Body

65301 PERFECT 720 cfm Hi-Velocity 68mm 1991-04 Jeep 4.7L Stroker Throttle Body

65302 PERFECT 600 cfm Hi-Velocity 62mm 2005-06 Jeep 4.0L Throttle Body (2-wire IAC)

#### Jeep CJ Duraspark II Ignition Harness

Perfect replacement for your Jeep Duraspark II ignition system. It allows for the factory location of your module and coil. This part is recommended if you are also replacing the chassis harness.

30819 Fits 6 & 8 Cylinders 30812 Fits 4 Cylinders

#### Jeep CJ Manifold Heater Relay Kit

This simple plug-n-play kit allows a manifold heater to be used if you are rewiring your Jeep using a Painless chassis harness, using a later style manifold on an older Jeep, or if the factory relay was cut from your Jeep at some point in time.

30717

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#### **Upgraded Headlight Wiring Harness**

See Page 76 For More Details. 30815

#### 40126 - Jeep CJ DPM Dual Battery Kit

This 500 amp Digital Power Manager & Custom Battery Tray provides you with a direct replacement battery tray integrated with our dual battery controller for your '76-86 CJ Jeep. The DPM is a 500AMP Jump Start & continuous duty cycle weatherproof solid state control unit. While the tray is a powder-coated drop in replacement.

**Includes New Bolt-In Replacement Battery Tray!** 





Jeep JK Dash Mount Accessory Control System 57000 - Trail Rocker System Jeep Wrangler JK 2011-14 57002 - Trail Rocker System Jeep Wrangler JK 2007-10 (Automatic Transmission Applications Only)

Our new Trail Rocker system allows you to control up to eight accessories on your JK Jeep! Easily installed with our detailed instructions and plug-n-play design.

See page 74-75 for more information.







# **Chassis Harnesses** Customizable Weatherproof



### Includes Circuits For:

A/C & Heat Accessory #1 (Switched B+) Accessory #2 (Switched B+) Accessory #3 (Switched B+) Accessory #4 (B+) Accessory #5 (B+) Accessory #6 (Switched B+) Accessory / Cigarette Lighter Brake Lights Charging Fan Relay Activation Power Dome Light **Electric Choke Emergency Flashers Fused Power Source** Headlights Horn (Relay) Ignition Coil Instrument Panel Lighting & Gauges\* Park Lights Radio/Clock (Constant & Switched) Starting Tail Lights Third Brake Light Turn Signals Wipers \* Including Wires For: Fuel Gauge Oil Gauge Tachometer

This 26 circuit weatherproof harness can be used to update the wiring in just about any on road or off road vehicle. This tough kit features: a weatherproof fuse block with an o-ring sealed cover, weatherproof heat sealed crimp-on terminals, weatherproof horn relay and machined crimped splices with weatherproof shrink tubing. This Harness is adaptable to many of the original connector plugs in your vehicle and includes; pre-wired plugs for the head-lights; GM turn signal & column mounted ignition switch connectors.

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#### 10140 - 26 Circuit Customizable Weatherproof Chassis Harness



#### Waterproof Bulkhead Connector Kit

22-pin bulkhead connector kit allows for custom wiring at the firewall. Includes all necessary terminals and connectors. Uses 18-16 gauge wire.

40130



### Pro's Tip From Randy Clark

"Understanding relays and where to use them will save you some headaches"

See page 76 to learm about relays



Temperature Gauge

Voltmeter

# Chassis Harnesses Customizable Extreme Off-Road Harness



Wire a rock crawler, or even a basic off road vehicle with this 15 circuit extreme off road harness. Designed around our custom 10 fuse/4 relay weatherproof fuse block this harness provides all the wiring and amperage handling any off road vehicle could need. This completely customizable harness provides 10 fuses, two 40 Amp relays perfect for operating an electric cooling fan or fuel injection harness; and two 20 Amp relays perfect for operating lights, electric fuel pump or water pump. Parts kit includes heat-shrinkable crimp terminals, maxi-fuse, circuit breakers, zip ties, junction block and fuse block mounting bracket.

**Note:** This harness is not street legal. It has no provisions for lights, horn or wipers

#### 10144 - 15 Circuit Customizable Extreme Off-Road Harness



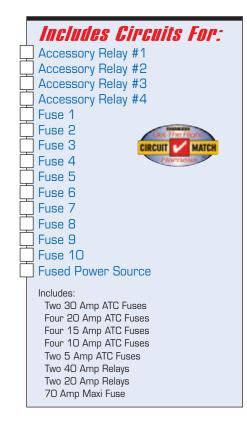
#### Weatherpack Connector Kit

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Use where rain, dust or other elements may affect electrical connections. Each kit includes a male and a female connector and the appropriate number of terminals. NOTE: Accepts only 14-16 gauge wire.

70401 - 1 Wire Kit (2pack) 70402 - 2 Wire Kit 70403 - 3 Wire Kit 70404 - 4 Wire Kit 70406 - 6 Wire Kit





# Chassis Harnesses Street & Track Race



### Includes Circuits For:

Accessory #1 Accessory #2 (Relay) **Brake Lights** Charging Dome Light Electric Fuel Pump #1 Electric Fuel Pump #2 Electric Water Pump **Emergency Flashers** Fan Relay Activation Power **Fused Power Source** Headlights Horn (Relay) Ignition Coil Park Lights Radio and Gauges B+ \* Starting Tail Lights Third Brake Light Turn Signals Wipers \* Including wires for: Fuel Gauge

CIRCUIT

If you want to keep your race car streetable and want to use all of your factory switches instead of a switch panel, this 21 circuit harness is for you. As with all of our chassis harnesses this kit has all the wires labeled and is pre terminated at the fuse block for easy installation. This harness includes an optional connector if you want to use a GM column mounted ignition switch. Also Included is a terminal assortment kit, with the necessary connectors for your turn signal switch, headlights, and alternator. Each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 50002 - 21 Circuit Pro Street Chassis Harness



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### **Painless Pro Solutions** Relay Kits

Are you blowing fuses and melting switches? Using relays could be your answer. High amperage circuits are best utilized with one of our relay kits.

See Page 76-80 For Info



### Pro's Tip From Stacey David

"Dielectric grease on your light bulb connections will prevent corrosion of the connections and it can be used any place you have connections exposed to moisture"

42

Oil Gauge

Tachometer

Temperature Gauge

# Chassis Harnesses Street & Track Race

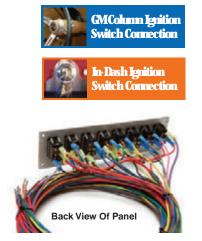


If you are looking for a switch panel and harness to keep your racecar streetable, this 21 circuit harness and switch panel combo is for you. As with all of our chassis harnesses this kit has all the wires labeled and is pre terminated at the fuse block for easy installation. This harness includes an optional connector if you want to use a GM column mounted ignition switch. The included switch panel is a roll bar/dash mount 8 switch rocker panel. This panel is prewired and is a direct plug and play into this harness. Also Included is a painless mounting plate, grommets, terminal assortment kit, and the necessary connectors for your turn signal switch, headlights, and alternator. Each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

50003 - 21 Circuit Pro Street Chassis Harness w/Switch Panel

### Panel Switches:

Start Ignition Electric Cooling Fan Fuel Pump #1 Fuel Pump #2 / Accessory Water Pump Lights Accessory





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See Page 90 For Info

#### **Painless Pro Solutions** Ground Strap Kits

No matter the application, you're not going anywhere unless you've got good grounds! Bad grounds are the number one problem in automotive electrical issues. Eliminate those electrical gremlins with a new set of Painless ground straps today!

	Includes Circuits For:	
Γ	Accessory #1	
Γ	Accessory #2 (Relay)	
Γ	Brake Lights	
Γ	Charging	
Γ	Dome Light	
Γ	Electric Fuel Pump #1	
Γ	Electric Fuel Pump #2	
Γ	Electric Water Pump	
Γ	Emergency Flashers	
	Fan Relay Activation Power	
	Fused Power Source	
	Headlights	
	Horn (Relay)	
	Ignition Coil	
	Park Lights	
	Radio and Gauges	
	Starting	
	Tail Lights	
Γ	Third Brake Light	
Γ	Turn Signals	
Γ	Wipers	
	* Including wires for:	
	Fuel Gauge	
	Oil Gauge CIRCUIT 🖌 MATCH	
	Tachometer Round	
	Temperature Gauge	



# Chassis Harnesses Track Only







### Includes Circuits For:

Accessory (Relay) Electric Fuel Pump #1 (Relay) Electric Fuel Pump #2 (Relay) Electric Vater Pump (Relay) Electric Fan (Relay) Fused Power Source Headlights (Relay) Ignition Coil (Relay) Starting (Relay) Tail Lights

### **Panel Switches:**

Start
Ignition
Electric Cooling Fan
Fuel Pump #1
Fuel Pump #2
Electric Water Pump
Lights
Accessory

This 10 circuit Race only harness features a relay for each fused circuit. The wires are pneumatically terminated and pre-inserted into the fuse block and relay blocks. The fuse block is labeled for the circuits at left but can be used to power any 12 volt electrical component. If you are also looking for a switch panel, we offer the two switch panels below that are designed to be plug and play and will plug directly into this harness. Each wire is oversized and custom printed with the circuit identification as well as using GM color codes for easy installation.

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#### 50001 - 10 Circuit Race Only Chassis Harness



This dash mounted switch panel is only for use with Painless harness number 50001(above). It features a plug and play harness that will plug directly into the 50001.

#### 50201 - 8-Switch Panel - Dash Mount



This roll bar mounted switch panel is only for use with Painless harness number 50001 (above). It features a plug and play harness that will plug directly into the 50001.

50202 - 8-Switch Panel - Roll Bar or Dash Mount

### Panel Switches:

Start Ignition Electric Cooling Fan Fuel Pump #1 Fuel Pump #2 Electric Water Pump Lights Accessory

# Chassis Harnesses Track Only



This 10 circuit Race only harness features a relay for each fused circuit and 6 switch contour rocker panel to control it. The wires are pneumatically terminated and pre-inserted into the fuse block and relay blocks. The fuse block is labeled for the circuits but can be used to power any 12 volt electrical component. The Switch panel measures 8 inches wide X 3 inches tall. The panel is painted black and silkscreened for easy identification of switch functions. This panel can be roll bar or dash mounted. Each wire is oversized and custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 50005 - 10 Circuit Race Only Chassis Harness w/Switch Panels

### Includes Circuits For:

	Accessory #1 (Relay)
	Accessory #2 (Relay)
	Electric Fuel Pump (Relay)
	Electric Water Pump (Relay)
	Electric Fan (Relay)
	Fused Power Source
	Headlights (Relay)
	Ignition Coil (Relay)
	Starting (Relay)
	Tail Lights
<u> </u>	



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# Race Accessories



#### Hot Shot Engine Bump Switch

Allows you to turn over the engine from the engine compartment for adjusting valves. It also overcomes starting problems due to an overheated starter or worn out electrical system by boosting amperage to the starter solenoid every time the vehicle is started.

#### 30201

#### Hot Shot Amperage Booster

Designed to overcome starting problems due to an overheated GM style starter or worn out electrical system. Works by boosting amperage to the starter solenoid.

#### 30202

#### **Remote Start Solenoid**

This switch allows you to position the starter solenoid any place you need to in order to make maintenance easier. Comes with wire and connectors to do the job right.

### 30203

#### **Alternator Shutdown Relay Kit**

This kit, complete with 250 amp solenoid, will effectively handle alternator feedback of the highest amperage alternators. Eliminates engine run-on when the master disconnect is turned off. **50105** 

#### PERFECT FLOW Fuel Delivery System

A serious dual pump system designed to provide sufficient fuel flow for 500 plus horsepower engines. Good for up to 1000 horsepower. Can also be configured as a main and secondary fuel pump system for a maximum dependability in racing, off road, and street applications. **65100** 

#### **Oxygen Sensor Fitting**

Weld-in for all fuel injection systems. **60406** 



#### **Alternator Safety Wire Kit**

Connects alternator charge wire to battery side of remote disconnect to prevent alternator run-on when shutoff is engaged. Contains 25' of 8-gauge wire and connectors. **30711** 

#### Master Disconnect Switch - 80140 Master Disconnect Switch With Mount Plate - 50710

#### Universal ground strap kits:

4 Piece kit includes (1) 14" 1/0 heavy duty ground strap, (3) 11" 10 gauge ground straps and self tapping screws. **40140** 

Single 1/0 heavy duty 14" ground strap. 40141

Single 10 gauge heavy duty 11" ground strap and (2) 1/4 self tapping screws for mounting. **40142** 







# Engine Harness Charge/Start/Ignition



### Includes Circuits For:

Accessory #1 Switched B+ Accessory #2 Constant B+ Accessory #3 Unfused Constant B+ Charging Electric Choke Ignition Oil Gauge Starting Tachometer Temperature Gauge Voltmeter The C.S.I. harness is a universal weather-proof engine harness providing wiring to accommodate the Charging, Starting, and Ignition of just about any non fuel injected engine. The C.S.I. harness is the Painless solution to repairing damaged wiring on your carbureted engine or for cleaning up the clutter and taking the guess work away from those swapping from fuel injection to a carb. Accessory circuits aide in re-connecting a factory fuse block, electric fuel pump, electric water pump, electric cooling fans, light switch, etc. Each wire is custom printed with the circuit identification as well as using GM color codes for easy installation.

#### 30830 - CSI Universal Engine Harness



#### **Alternator Safety Wire Kit**

Connects alternator charge wire to battery side of remote disconnect to prevent alternator run-on when shutoff is engaged. Contains 25' of 8-gauge wire and connectors. **30711** 



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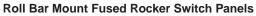
### Pro's Tip From Randy Clark

"If your shop has an engine dyno or "run stand", keep the wiring simple by using this Painless C.S.I. harness."

# Switch Panels







Designed with input from some of the best drag racers in the country, Painless switch panels feature: Heavy-duty lightweight non-reflective housing designed to mount to a roll bar using standard metal hose clamps. Lighted rocker switches are color coded for quick visual reference. All circuits individually fused and easily accessible for quick testing and replacement. All units come complete with 18' of high temp TXL wire using machine applied, vibration resistant, fully insulated terminals. GRNIVAT

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- **50301** 4 Switch Panel Controls: Start, Ignition, 2 accessories. (3 x 5.75 x 3.125)
- **50302** 6 Switch Panel Controls: Start, Ignition, Fuel Pump, Electric Fan/Water Pump, and 2 Accessories. (3 x 8.75 x 3.125)
- 50303 8 Switch Panel Controls: Start, Ignition, Electric Fan, Fuel Pump #1, Fuel Pump #2, Water Pump, Lights and 1 Accessory. (3 x 10.75 x 3.125)
- **50506** 6 Switch In-Line Panel Controls Start, Ignition, Fuel Pump, Water Pump/Fan\*, and 2 Accessories. - Shown below Use in vertical or horizontal position. (15 x 1.5 x 2.5) (\*Three position switch for Water Pump/off/Water Pump and Fan)



# Dash Mount Non-Fused Rocker Switch Panels

Looking to mount your switches in the dash rather than on a roll bar? Then these new non-fused panels are your answer. Available in four, six or eight switch versions, these heavy-duty, light-weight panels are pre-assembled with vibration-resistant terminals and 18 feet of the best high temperature wire available.

50404 - 4 Switch Controls: Start, Ignition, 2 accessories. (3 x 5.75 x 2.5)
50406 - 6 Switch Controls: Start, Ignition, Fuel Pump, Water Pump/Fan and 2 accessories. (3 x 8.75 x 2.5) - Shown left

#### **Circuit Breaker Protected Rocker Switch Panels**

The most popular switch panels in drag racing today are now even better. These switch panels feature circuit breakers in place of standard fuses, so if you're on the line and circuit blows, it can be reset with just a touch. Features also include color-coded lighted rocker switches for easy identification, 18 ft. of the highest grade TXL wire, vibration resistant terminals and a black finish for reduced glare.

- 50305 6 Switch rocker panel. Start, ignition, fuel pump, electric fan/water pump and 2 accessories.(3 x 8.75 x 3.125) Shown left
- **50306 -** 8 Switch rocker panel. Start, ignition, electric fan, fuel pump #1 and #2, water pump, lights and one accessory. (3 x 10.75 x 3.125)











#### Race Harness Switch Panels (For use with our 50001 race harness)

**50201 -** 8-Switch flat plate style for in-dash mounting. Start, Ignition, Electric Cooling Fan, Fuel Pump #1, Fuel Pump #2, Electric Water Pump, Lights, Accessory (3 x 10.75 x 3.125) Shown below left

**50202 -** 8-Switch self contained style for roll bar mounting. Start, Ignition, Electric Cooling Fan, Fuel Pump #1, Fuel Pump #2, Electric Water Pump, Lights, Accessory (3 x 10.75 x 3.125) Shown below right





#### Pro Street / Stock Panels

**50410** - 8-switch Pro Street panel which includes: Push Button Start, Toggle-Ignition, Fuel Pump, Fan, Park/Head Lights, Turn Signals and Horn. (3 x 10.75 x 2.5) Shown below left

**50412 -** 6-switch Pro Stock panel which includes: Push Button Start, Toggle-Ignition, Fuel Pump, Water Pump/Fan and Two Accessories. (3 x 10.75 x 2.5) Shown below right



#### **Mustang Radio Replacement Switch Panels**

Rocker Switch Panel mounts in radio/stereo location of Mustangs. Kit includes five heavy duty on/off toggle switches, one each of momentary and on/off/on switches color-coded TXL wire. **50210 -** fits 1979-86 Mustangs. (2.875 x 8 x 3.125) Shown below left

Toggle Switch Panel mounts in radio/stereo location of Mustangs. Kit includes six colored LEDs, five heavy duty on/off toggle switches, one each of momentary and on/off/on switches color-coded TXL wire. **50420 -** Fits 1979-86 Mustangs. (2.875 x 8 x 3.125) Shown below center **50421 -** Fits 1987-93 Mustangs. (5 x 8.5 x 3.125) Shown below right



#### **Carbon Fiber Mustang Power Panel**

Race quality carbon fiber switch panel adds styling and functionality to your Mustangs as well as provide a convenient way to mount switches. Mounts in the radio/stereo location of 1987-93 Mustangs. Hide-A-Panel fits in the ashtray location of 1987-97 Mustangs. Features four lighted rocker switches or a nitrous kit with three lighted rockers and one momentary switch for purge function. Each panel includes 18 feet of high temp TXL wiring. **50430** - Rocker Switch Mustang Power Panel



49

# Switch Panels





#### Weatherproof Off-Road Switch Panels

These rugged switch panels are the only panels to consider if your vehicle will be subject to harsh outdoor conditions. They feature a formed polyethylene liner to seal the face plate to the dash or chassis, creating a water-resistant seal. The panel includes a keyed ignition switch for added security. All switches and circuit breakers are protected by weather resistant boots and all circuits are protected with circuit breakers. All units come complete with 18' of high temp TXL wire using machine applied, vibration resistant, fully insulated terminals. These kits are shipped unassembled with peel and stick labels for custom applications.

50330 - 4 Toggle Off-Road Switch Panel, Dash Mount (3 x 6.25 x 2.5)
50331 - 4 Toggle Off-Road Switch Panel, Roll Bar Mount (3 x 6.25 x 2.5)
50332 - 6 Toggle Off-Road Switch Panel, Dash Mount (3 x10.75 x 2.5)
50333 - 6 Toggle Off-Road Switch Panel, Roll Bar Mount (3 x10.75 x 2.5)



Roll Bar Mount 50337 Shown

Roll Bar Mount 50335 Shown With Waterproof Switch Covers In Place



#### Push Button Start Off-Road Switch Panels

Following the successful introduction of our Off-Road Switch Panels in 2005, we had many requests for a similar panel but with a push button rather than a keyed start. So here you are, available as dash or roll bar mount and with four or six toggle switches. These kits are shipped unassembled with peel and stick labels for custom applications.

**50334 -** 4 Switch, Dash Mount (3 x 8.625 x 2.5) **50335 -** 4 Switch, Roll Bar Mount (3 x 8.625 x 2.5) **50336 -** 6 Switch, Dash Mount (3 x10.75 x 2.5) **50337 -** 6 Switch, Roll Bar Mount (3 x10.75 x 2.5)



#### **Extreme Off-Road Switch Panels**

These new waterproof switch panel kits contain extra switches to customize the panel for any use. Includes momentary, on/off and on/off/on toggle switches with boots, choice of keyed or push button start and colored LED lights. These panels contain no wire but work great with our Extreme Offroad Harness #10144 (See page 39)

**50340 -** 6 Switch Off Road Panel with Key (3 x10.75 x 2.5) **50341 -** 6 Switch Off Road Panel with Push Button (3 x10.75 x 2.5)





# Switch Panel Components

#### **Replacement Rocker Switches**

Fits cut-out dimensions of 13/16" x 17/16" 80400 - Momentary On (non-lighted) 80401 - On/Off - Red Light 80402 - On/Off/Momentary On - Green Lights 80403 - On/Off/On - Red Lights 80404 - On/Off - Amber Light 80405 - On/Off - Blue Light 80111 - Replacement Diode



Fits cut-out dimensions of 1-1/2" x 1/2" These are the switches used in our Mustang Hide-a-Panels. Red, blue, green, amber and momentary (no light).

- 80411 Momentary (non-lighted)
- 80412 On/Off Single Pole Blue Light
- 80413 On/Off Single Pole Green Light
- 80414 On/Off Single Pole Amber Light
- 80415 On/Off Single Pole Red Light

#### **MIL Spec Toggles**

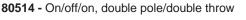
By far the most reliable switches you can find. Internally sealed, this switch is used extensively in military aircraft. Switch design allows terminals to be screwed directly to the switch housing eliminating the tab mount that can sometimes break loose. 80510 - Off/momentary on SPST

80511 - Off/on SPST

#### Heavy Duty Toggles - All 20 amp

80501- Off/Momentary on, single pole/single throw

- 80502 Off/on, single pole/single throw
- 80512 On/off/on, single pole/double throw
- 80513 Off/on, double pole/single throw



Waterproof Toggles - All 20 amp (All include boot 80520 shown below) 80530 - On/off, single pole/single throw

- 80531 Off/momentary on, single pole/single throw
- 80532 On/off/on, single pole/double throw
- 80533 Off/on, double pole/single throw
- 80534 On/off/on, double pole/double throw

#### Waterproof Switch Boot

Use shaft mounted toggles with 15/32" threads. 80520

#### Aircraft Switch Cover

Shields all shaft mounted toggles for extra safety. 80521

#### Waterproof Universal Keyed Ignition Switch

Fits 3/4" hole. Replacement part for our switch panels. 80529

**Extreme Conditions Push Button Momentary Start** Fits 5/8" hole. Replacement part for our switch panels. 80528

#### **Replacement Circuit Breakers**

Push-in manual reset circuit breakers. 80107 - 10 amp breaker 80108 - 15 amp breaker 80109 - 20 amp breaker 80110 - 30 amp breaker















# Fuel Injection Harness Intro



#### **Fuel Injection Made Painless**

Those who choose to run the factory computer will appreciate the simplicity of a Painless Fuel Injection Wiring Harness. Yes, you can whittle away at the stock harness and eventually make it work, but why complicate your life? When all of our fuel injection harnesses come with a lifetime warranty. On this page you will find some important details you should know when picking the right harness for your project.

Our engineers have worked out all the potential problems ahead of time so all you have to do is follow the straightforward instructions and you're on your way. All of the wiring is TXL, 600 volt, 125 degree centigrade rated with cross-link insulation. Every wire is also factory color-coded and labeled for easy installation.

All Painless fuel injection harnesses are standalone. In the automotive aftermarket this term has been commonly used to describe fuel injection harnesses. To put it simply, "standalone" means the harness has its own fuse block and works independently, and for the most part, needs no integration with the vehicle's existing wiring outside of an ignition switched power source.

A wire found on the fuel injection harness will need to connect to an ignition switched power source on the vehicle that will be "hot" in the Start and Run positions. This will activate the pre-wired ignition relays found on the fuel injection harness which will provide all the necessary power to the ECM, injectors, oxygen sensors, etc. Since you are simply activating relays, there is no chance of overloading any existing circuits on the vehicles chassis harness. Furthermore, since the fuel injection harness contains its own fuse block, no modifications to your vehicles existing chassis harness is needed.

**How do you pick the right harness?** To further explain this let's look at examples of some typical questions we commonly get at shows and on the tech lines:

Customer: "Do you make a harness for a 2001 Camaro LS1 in a 1968 Chevy truck?"
Painless: "Yes, Painless part number 60508"
Customer: "Do you make a harness for a 2001 Camaro LS1 in a 1989 Mustang fox body?"
Painless: "Yes, Painless part number 60508"
<b>Customer:</b> "Do you make a harness for a 2001 Camaro LS1 in a heavily modified sandrail that I plan to turbo charge?"
Painless: "Yes, Painless part number 60508"

As you can see, the application or vehicle the engine will be going into is not a factor in the fuel injection harness used. The only thing that will determine what fuel injection harness you require is the year and model of the engine or vehicle the engine was originally in. As seen in the examples above, a 5.7 liter LS1 from a 2001 Camaro will require the use of part number 60508 and work in old work trucks, street/strip cars, offroad vehicles, and we've even had customers who used them in boats and air planes.

Many of our more popular harnesses have two separate length options to allow for ECM placement. Our standard length harness will have about 4 feet of wire from the back of the engine to the ECM connector(s). These harnesses are perfect for those mounting the ECM in the engine compartment or under the dash. Our extra long versions will have about 8 feet of wire from the back of the engine to the ECM connector(s) to allow the ECM to be mounted under a seat or in a center console. Take notice to the length you may need as this will affect which part number you require.





# Fuel Injection Harness ECM Reflash



Free Basic Performance Computer Tuning!





#### Painless Free ECM Reflash Program

Why pay hundreds of dollars to have a tuner configure your ECM? This program is only available for those who have purchased any of our GM LS or Gen III/IV car or truck fuel injection harnesses. When

you see this logo next to the harness you are looking at, you will know it's eligible for this program. This is a basic start and run tune that we only recommend for a near stock application. We will only change the following parameters: delete VATS/PASS-KEY security, cooling fan on/off temperatures, rear end gear ratio, tire size, speed limiter, rpm limiter, idle rpm, and we will remove any diagnostic codes you request. If your setup requires any other parameters tuned you will need to locate a local tuner. All ECMs are left unlocked to allow easy access for your tuner. Please visit our website for Reflash Program form and more details.

Most of our fuel injection harnesses for GM Gen. III and Gen. IV engines can also be purchased with the same complementary flashed ECM and/or TCM. If you do not have a ECM/TCM to fit the engine or transmission you are installing. This is a convenient solution to sourcing the correct component.

Looking over our fuel injection offering, you will see the term "ECM Service #", this is the engine computer part number. Many ECM part numbers were used in both V6 and V8 applications. Your ECM must match the engine size/ operating system you are using.

These are factory GM style ECMs with a basic calibration and are the perfect match for the corresponding Painless Performance fuel injection harness listed. These ECMs require you to fill out the online ECM flash form. We must have this information to process your ECM.

ECM Part Numbers:

60700 - GM #12200411 ECM 60701 - GM #12597121 or 19210738 ECM 60702 - GM #12612384 ECM 60710 – GM #24234503 TCM

**NOTE:** These ECMs only accept specific VIN number calibrations. Please contact our tech support if you are unsure of which year VIN your engine/transmission combination will require.

#### GEN III Benchtop Flash Pigtail.

Used to bench-top (out of vehicle) flash LS series ECMs with service numbers 12200411 & 9354896. This pigtail connects to any 12 volt source and includes ECM and OBDII connections. **60550** 



# Fuel Injection Harnesses Integrated EFI/Chassis Harnesses



Our integrated EFI/Chassis harnesses are the perfect solution for anyone doing a complete rewire of a vehicle as well as transplanting a GM Gen III fuel injected engine. This kit is designed for use on 1997-2004 LS1 engines with a 4L60E, 4L80E, or a manual transmission. The chassis wiring and fuel injection wiring are fully integrated into a single 26 circuit/7 relay fuse block, eliminating the need to have separate fuses and relays for the fuel injection. The chassis harness connections are the same GM color coded connections as our 10201 kit. The fuel injection connections include the same labels connections as our 60508 harnesses. These harnesses do not support flex fuel engines and require the use of a mechanical throttle body. Included in this kit you will also find a detailed step-by-step manual and all the required terminals & connectors for easy installation.

#### Includes Circuits For: A/C & Heat Accessory / Cigarette Lighter **Backup Lights Brake Lights** Charging **Cruise Control** Courtesy & Dome Light Electric Fuel Pump **Emergency Flashers** Cooling Fan Relay #1 Cooling Fan Relay #2 **Fused Power Source** Headlights Horn Relay **Ignition Coil Instrument Panel Lighting & Gauges** Park Lights Power Antenna Power Door Locks Power Windows Radio/Clock (Constant & Switched) Starting **Tail Lights** Third Brake Light **Turn Signals** Wipers

This harness also requires the following GM mating parts; ECM #12200411 (Painless # 60700)

See Page 53 for custom ECM and Flash options.

60608 - 1997-2004 GM LS1 Integrated EFI/Chassis Harness (Manual Throttle)





### Includes Component Connections For:

- A/C Compressor
- Alternator
- Cam Position Sensor
- Coolant Temperature Gauge
- Crank Position Sensor
- Data Link Connector
- Driver/Pass Front O2 Sensors
- Engine Coolant Temperature
- Fuel Pump Relay
- Grounds
- Idle Air Control
- Ignition Coils
- Ignition Switch Signal
- Injectors EV1/Bosch Style

- Intake Air Temperature Sensor
- Knock Sensors
- Malfunction Indicator Lamp
- MAP Sensor
- Mass Airflow Sensor
- Oil Pressure Gauge
- ECM
- PRNDL Switch
- Starter
- Tachometer
- Throttle Position Sensor
- Transmission
- Vehicle Speed Sensor
- VSS Output for Speedometer

54

# FUEL INJECTION HARNESSES Integrated EFI/Chassis Harnesses



Our integrated EFI/Chassis harnesses are the perfect solution for anyone doing a complete rewire of a vehicle as well as transplanting a GM Gen III fuel injected engine. This kit is designed for use on 1999-2006 4.8L, 5.3L, & 6.0L Vortec truck engines with a 4L60E, 4L80E, or a manual transmission. The chassis wiring and fuel injection wiring are fully integrated into a single 26 circuit/7 relay fuse block, eliminating the need to have separate fuses and relays for the fuel injection. The chassis harness connections are the same GM color coded connections as our 10201 kit. The fuel injection connections include the same labels connections as our 60217 harnesses. These harnesses do not support flex fuel engines and require the use of a mechanical throttle body. Included in this kit you will also find a detailed step-by-step manual and all the required terminals & connectors for easy installation.

### Includes Circuits For:

A/C & Heat Accessory / Cigarette Lighter **Backup Lights Brake Lights** Charging **Cruise Control** Courtesy & Dome Light **Electric Fuel Pump Emergency Flashers** Cooling Fan Relay #1 Cooling Fan Relay #2 **Fused Power Source** Headlights Horn Relay **Ignition Coil Instrument Panel Lighting & Gauges** Park Lights Power Antenna Power Door Locks **Power Windows** Radio/Clock (Constant & Switched) Starting Tail Lights Third Brake Light Turn Signals Wipers

#### This harness also requires the following GM mating parts;

ECM #12200411 (Painless # 60700)

See Page 53 for custom ECM and Flash options.



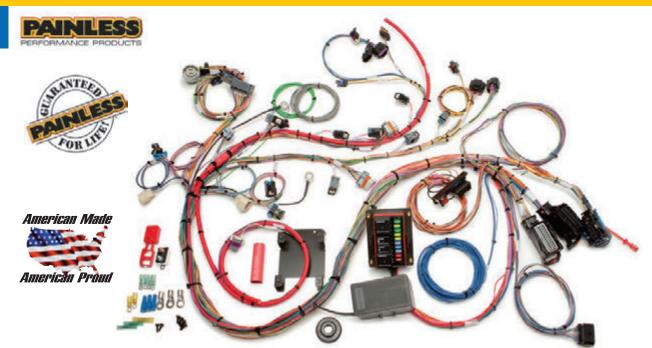
60617 - 1999-2006 GM Gen III 4.8L, 5.3L & 6.0L EFI/Chassis Harness (Manual Throttle)



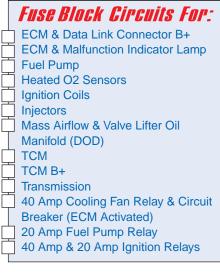
- A/C Compressor
- Alternator
- Cam Position Sensor
- Coolant Temperature Gauge
- Crank Position Sensor
- Data Link Connector
- Driver/Pass Front O2 Sensors
- Engine Coolant Temperature
- Fuel Pump Relay
- Grounds
- Idle Air Control
- Ignition Coils
- Ignition Switch Signal
- Injectors Delphi Multec 2 Style

- Knock Sensors
- Malfunction Indicator Lamp
- MAP Sensor
- Mass Airflow Sensor
- Intake Air Temperature Sensor
- Oil Pressure Gauge
- ECM
- PRNDL Switch
- Starter
- Tachometer
- Throttle Position Sensor
- Transmission
- Vehicle Speed Sensor
- VSS Output for Speedometer

# Fuel Injection Harnesses 2007 UP 183



This harness is designed for use on any 2007 and up LS3 with throttle by wire. It uses the factory ECM & TCM and will operate engines with or without variable valve timing (VVT) and active fuel management (displacement on demand or DOD) with a 4L65E, 4L70E, 4L80E, or 4L85E transmission. You cannot use a 4L60E transmission with this harness as it is missing the Input Speed Sensor required by the Transmission Control Module. This harness does not support flex fuel operation and will not work on GTO's. Included with this harness is a 10 circuit weatherproof fuse block & mounting bracket, detailed step-by-step manual, GM color coded wires with labels, and all the required terminals and connectors for easy installation.



#### GM Gen IV Tach Driver

The ECM used in GM Gen IV applications does not have a tach output wire to provide a tach signal to a tachometer. This small device converts the 5 Volt 58X crank sensor signal from any Gen

IV GM V8 engine into a 12 Volt signal useable by most aftermarket and OEM tachometers. 60150



This harness also requires the following GM mating parts; ECM #12597121 (Painless # 60701), #12612384 (Painless # 60702) or #19210738; TCM #24234503(Painless # 60710) or #24252114; Accelerator pedal #25832864 or #25835421.

See Page 53 for custom ECM and Flash options.

60524 - 2007 Up GM LS3 (Throttle by Wire) Harness Std. Length



### Includes Component Connections For:

- Accelerator Pedal Position Sensor
- Alternator (Including a 4 gauge power wire)
- Brake Switch
- Cam Position/Cam Phazer Sensor
- Cooling Fan
- Crank Position Sensor
- Data Link Connector
- Driver/Pass Front O2 Sensors
- Driver/Pass Knock Sensors
- ECM
- Engine Coolant Temperature
- Fuel Pump
- Grounds
- Ignition Coils
- Ignition Switch Signal

- Injectors EV6/US Car Style
- Input Speed Sensor 4L80E/4L85E
- Malfunction Indicator Lamp
- MAP Sensor
- Mass Airflow / Intake Air Temperature Sensor
- Oil Pressure Sensor
- PRNDL Switch
- Reverse Lights
- Starter
- TCM
- Throttle Body
- Transmission
- Valve Lifter Oil Manifold (DOD)
- Vehicle Speed Sensor
- VSS Output for Speedometer

56

# Fuel Injection Harnesses 2007-2012 4.81, 5.31, 6.01, 6.21



This harness is designed for use on any 2007-2012 4.8L, 5.3L, 6.0L, & 6.2L Vortec truck engines with throttle by wire. It uses the factory ECM & TCM and will operate engines with or without variable valve timing (VVT) and active fuel management (displacement on demand or DOD) with a 4L65E, 4L70E, 4L80E, or 4L85E transmission. You cannot use a 4L60E transmission with this harness as it is missing the Input Speed Sensor required by the Transmission Control Module. This harness does not support flex fuel operation. Included with this harness is a 10 circuit weath-erproof fuse block & mounting bracket, detailed step-by-step manual, GM color coded wires with labels, and all the required terminals and connectors for easy installation.



- 20 Amp Fuel Pump Relay
- 40 Amp & 20 Amp Ignition Relays

Fuse Block Gircuits For:

ECM & Malfunction Indicator Lamp

ECM & Data Link Connector B+

### GM Gen IV Tach Driver

The ECM used in GM Gen IV applications does not have a tach output wire to provide a tach signal to a tachometer. This small device converts the 5 Volt 58X crank sensor signal from any Gen

IV GM V8 engine into a 12 Volt signal useable by most aftermarket and OEM tachometers. 60150



This harness also requires the following GM mating parts; ECM #12597121 (Painless # 60701), #12612384 (Painless # 60702) or #19210738; TCM #24234503(Painless # 60710) or #24252114; Accelerator pedal #25832864 or #25835421.

See Page 53 for custom ECM and Flash options\*.

60526 - 2007-2012 GM Gen IV 4.8-6.2L (Throttle by Wire) Harness Std. Length



\* **60026** - This kit will have a #60526 harness as well as a custom flashed PCM (Painless #60701) and TCM (Painless #60702).

- Accelerator Pedal Position Sensor
- Alternator (Including a 4 gauge
- power wire) Brake Switch
- Brake Switch
- Cam Position/Cam Phazer Sensor
- Cooling Fan
- Crank Position Sensor
- Data Link Connector
- Driver/Pass Front O2 Sensors
- Driver/Pass Knock Sensors
- ECM
- Engine Coolant Temperature
- Fuel Pump
- Grounds
- Ignition Coils
- Ignition Switch Signal

- r Injectors EV6/US Car Style
  - Input Speed Sensor 4L80E/4L85E
  - Malfunction Indicator Lamp
  - MAP Sensor
  - Mass Airflow / Intake Air Temperature Sensor
  - Oil Pressure Sensor
  - PRNDL Switch
  - Reverse Lights
  - Starter
  - TCM
  - Throttle Body
  - Transmission
  - Valve Lifter Oil Manifold (DOD)
  - Vehicle Speed Sensor
  - VSS Output for Speedometer

# Fuel Injection Harnesses 2005-2006 GM 182



This harness is designed for the 2005 - 2006 throttle by wire LS2 engines using an LS1 / LS6 ECM and a 4L60E, 4L80E, or a manual transmission. The engine must have a 24x crank reluctor (black). This harness will not work with a factory GTO ECM. This harness will only operate these LS2 engine codes: ZJA, ZJB, 5MC, YTA and 6MC. These engines were factory equipped in 2005 Corvette, 2005-2006 GTO and 2006 SSR and also available as a crate engine from GMP. Harnesses do not include any emissions related connections. Included with this harness is an 8 circuit modular fuse block, detailed step-by-step manual, and GM color coded wires with labels for easy installation.

### Fuse Block Circuits For:

DLC B+
Driver Side Injectors and Coils
Dual 40 amp Ignition Relays
ECM & Malfunction Indicator Lamp
ECM B+
Fuel Pump
Heated O2 Sensors Mass Airflew

- Heated O2 Sensors, Mass Airflow
- Sensor, & Brake Switch
- Pass Side Injectors & Coils
- Transmission & TAC Module

## This harness also requires the following GM mating parts;

ECM #12200411 (Painless # 60700); TAC Module #12578953 or #19245405; Accelerator Pedal #12565643.

See Page 53 for custom ECM and Flash options.

60520 - 2005-2006 GM LS2 (Throttle by Wire) Harness Std. Length



- Accelerator Pedal Position Sensor
- Alternator
- Brake Switch
- Cam Position Sensor
- Clutch Pedal Position
- Crank Position Sensor
- Cruise Control
- Data Link Connector
- Driver/Pass Front O2 Sensors
- Driver/Pass Knock Sensors
- ECM
- Engine Coolant Temperature
- Fan #1 Relay Ground ECM Activation
- Fan #2 Relay Ground ECM Activation
- Fuel Pump
- Fuel Pump Relay
- Fuel Pump Test
- Gear Indicator Switch
- Grounds
- Ignition Coils

- or Ignition Switch Signal
  - Injectors EV6/US Car Style
  - Malfunction Indicator Lamp
  - MAP Sensor
  - Mass Airflow / Intake Air Temperature Sensor
  - Oil Pressure Sensor
  - Reverse Lockout Soleniod
  - Skip Shift Light
  - Skip Shift Solenoid
  - Starter
  - Throttle Actuator Control Module
  - Throttle Actuator Control Module to Accelerator Pedal Pigtail
  - Tachometer
  - Throttle Body
  - Transmission
  - Vehicle Speed Sensor
  - VSS Output for Speedometer





# Fuel Injection Harnesses 1997-2004 GM LS1/LS6 Corvette



This harness is designed for the 1997-2004 throttle by wire LS1/LS6 engines with a 4L60E, 4L80E, or a manual transmission. These engines were factory equipped in 1997-2004 Corvette. Harnesses do not include any emissions related connections. Included with this harness is an 8 circuit modular fuse block, detailed step-by-step manual, and GM color coded wires with labels for easy installation.

Fuse Block	Circuits For:
DLC B+	

- Driver Side Injectors and Coils
- Dual 40 amp Ignition Relays
- ECM & Malfunction Indicator Lamp
- ECM B+
- Fuel Pump
- Heated O2 Sensors, Mass Airflow
- Sensor, & Brake Switch
- Pass Side Injectors & Coils
- Transmission & TAC Module

This harness also requires the following GM mating parts; ECM #12200411 (Painless # 60700); TAC Module #12578953 or #19245405; Accelerator Pedal #12565643.

See Page 53 for custom ECM and Flash options.

60522 - 1997-2004 GM LS1 (Throttle by Wire) Harness Std. length 60523 - 1997-2004 GM LS1 (Throttle by Wire) Harness Extra length



- Accelerator Pedal Position Sensor Ignition Switch Signal
- Alternator
- Brake Switch
- Cam Position Sensor
- Clutch Pedal Position
- Crank Position Sensor
- Cruise Control
- Data Link Connector
- Driver/Pass Front O2 Sensors
- Driver/Pass Knock Sensors
- ECM
- Engine Coolant Temperature
- Fan #1 Relay Ground ECM Activation
- Fan #2 Relay Ground ECM Activation
- Fuel Pump
- Fuel Pump Relay
- Fuel Pump Test
- Gear Indicator Switch
- Grounds
- Ignition Coils

- Injectors EV1/Bosch Style
- Malfunction Indicator Lamp
- MAP Sensor
- Mass Airflow / Intake Air Temperature Sensor
- Oil Pressure Sensor
- Reverse Lockout Soleniod
- Skip Shift Light
- Skip Shift Solenoid
- Starter
- Throttle Actuator Control Module
   Throttle Actuator Control Module
  - to Accelerator Pedal Pigtail
- Tachometer
- Throttle Position Sensor
- Transmission
- Vehicle Speed Sensor
- VSS Output for Speedometer



# Fuel Injection Harnesses 1998-2002 GM LS1. LSG



This harness is designed for the 1998-2002 LS1 mechanical throttle body engines using an LS1 / LS6 ECM with a 4L60E, 4L80E, or a manual transmission. These engines were found in 1998-2002 Camaro/Firebird. This harness will also work on 1997-2004 Throttle By Wire (TBW) LS1/LS6 engines which has been changed to mechanical throttle body or any 1999-2006 (4.8, 5.3, & 6.0) Vortec truck engine which has been changed to a factory of aftermarket LS1 intake manifold, mechanical throttle body, and injectors. Harnesses do not include any emissions related connections but are available separate, see below for more details. Included with this harness is an 8 circuit modular fuse block, detailed step-by-step manual, and GM color coded wires with labels for easy installation.

### Fuse Block Circuits For:

DLC B+
Driver Side Injectors and Coils
Dual 40 amp Ignition Relays
ECM & Malfunction Indicator Lamp
ECM B+
Fuel Pump
Heated O2 Sensors, Mass Airflow
Sensor, & Brake Switch
Pass Side Injectors & Coils
Transmission

This harness also requires the following GM mating parts; ECM #12200411 (Painless # 60700) or #9354896.



See Page 53 for custom ECM and Flash options\*.

60508 - 1998-2002 GM LS1, LS6 (Manual Throttle) Harness Std. Length 60509 - 1998-2002 GM LS1, LS6 (Manual Throttle) Harness Extra Length

- \* **60008** This kit will have a #60508 harness as well as a custom flashed #12200411 ECM. See Page 53 for custom ECM and Flash information.
- \* **60009** This kit will have a #60509 harness as well as a custom flashed #12200411 ECM. See Page 53 for custom ECM and Flash information.

### Includes Component Connections For:

- Alternator
- Brake Switch
- Cam Position Sensor
- Crank Position Sensor
- Data Link Connector
- Driver/Pass Front O2 Sensors
- Engine Coolant Temperature
- Fan #1 Relay Ground ECM Activation
- Fan #2 Relay Ground ECM Activation
- Fuel Pump
- Fuel Pump Relay
- Fuel Pump Test
- Gear Indicator Switch
- Grounds
- Idle Air Control
- Ignition Coils
- Ignition Switch Signal

- Injectors EV1/Bosch Style
- Intake Air Temperature Sensor
- Knock Sensors
- Malfunction Indicator Lamp
- MAP Sensor
- Mass Airflow Sensor
- ECM
  - Reverse Lockout Soleniod
  - Skip Shift Light
  - Skip Shift Solenoid
  - Starter
  - Tachometer
  - Throttle Position Sensor
  - VATS
  - Transmission
  - Vehicle Speed Sensor
  - VSS Output for Speedometer

**60324** - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60508 harness. This harness provides connections to the Rear Oxygen Sensors, Fuel Tank Pressure Sensor, Secondary Air Pump, Secondary Air Bleed Valve, EGR Valve, Canister Purge Solenoid and Canister Vent Solenoid.

**60325** - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60509 harness. This harness provides connections to the Rear Oxygen Sensors, Fuel Tank Pressure Sensor, Secondary Air Pump, Secondary Air Bleed Valve, EGR Valve, Canister Purge Solenoid and Canister Vent Solenoid.

# Fuel Injection Harnesses 1999-2006 4.81, 5.31, 6.01



This harness is designed for use on the 1999-2006 4.8L, 5.3L, 6.0L throttle by wire engines with a 4L60E, 4L80E, or a manual transmission. These engines were found in factory 2003-2006 Vortec Trucks. 1999-2002 engines will require installing a 2003-2006 TBW throttle body. Engine codes supported are LR4, LM7, LM4, LQ4 and LQ9. This harness will support flex fuel and non flex fuel engines. Flex fuel engines will require an inline fuel composition sensor in order to run E85 fuel. Included with this harness is a 10 circuit weatherproof fuse block & mounting bracket, detailed step-bystep manual, and GM color coded wires with labels for easy installation.

	Fuse Block Circuits For:
	Brake and Cruise Switch
Dual 40 amp Ignition Relays	
	ECM (IGN)
	ECM B+
	Fuel Injectors
	Fuel Pump
	Heated O2 Sensors
	Ignition Coils
	Mass Airflow and Fuel
	Compensation Sensor
	Throttle Actuator Control Module
	Transmission and Park Neutral
	Position Switch
	20 Amp Cooling Fan Relay
	20 Amp Fuel Pump Relay

American Mada American Proud This harness also requires the following GM mating parts; ECM #89017733, #12576106, #12583560, or #12602802; TAC Module #12578953 or #19245405; Accelerator Pedal #12565643; Flex Fuel Sensor #12570260.

See Page 53 for custom ECM and Flash options.

60221 - 1999-2006 GM Gen III 4.8, 5.3 & 6.0L (Throttle by Wire) Harness Std. Length



- A/C Request
- Accelerator Pedal Position Sensor
- Alternator
- Brake Switch
- Cam Position Sensor
- Cooling Fans
- Crank Position Sensor
- Cruise Control
- Data Link Connector Driver/Pass Front O2 Sensors
- ECM
  - Engine Coolant Temperature
  - Fuel Compensation Sensor
  - Fuel Pump
  - Fuel Pump Test
  - Grounds
  - Ignition Coils
  - Ignition Switch Signal
  - Injectors EV6/US Car Style or Delphi Multec 2 Style

- Input Speed Sensor Knock Sensors Knock Sensor Pigtail
- Malfunction Indicator Lamp
- MAP Sensor
- Mass Airflow / Intake Air **Temperature Sensor**
- Output Speed Sensor
- Park/Neutral Switch
- Reverse Lights
- Starter
- Starter Relay Activation
- Tachometer
- Throttle Actuator Control Module Throttle Actuator Control Module To Accelerator Pedal Pigtail
- Throttle Body
- Transmission
- VSS Output for Speedometer

# Fuel Injection Harnesses 1999-2006 4.81, 5.31, 6.01



This harness is designed for the 1999-2006 4.8L, 5.3L, 6.0L mechanical throttle body engines using an LS1 / LS6 PCM with a 4L65E, 4L70E, 4L80E, 4L85E, or a manual transmission. 2003-2006 Engines will require a mechanical throttle body to be installed. 2003-2006 engines which were originally flex fuel will also require Delphi Multec 2 (factory truck style) injectors to be installed. Harnesses do not include connections for the rear O2 sensors or fuel tank pressure sensor but are available separate, see below for more details. Included with this harness is a 10 circuit weatherproof fuse block, detailed step-by-step manual, and GM color coded wires with labels for easy installation.

### Fuse Block Circuits For:

Air Pump & Air Pump Solenoid Canister Purge, Canister Vent, Transmission, & Park Neutral Position Switch **Driver Side Injectors & Coils Dual 40 amp Ignition Relays Fuel Pump** Heated O2 Sensors. Mass Airflow Sensor, & Brake Switch Pass Side Injectors & Coils ECM B+ & DLC B+ ECM IGN & Malfunction Indicator Lamp

This harness also requires the following GM mating parts; PCM #12200411 (Painless # 60700).

See Page 53 for custom ECM and Flash options\*.

60217 - 1999 - 2006 GM Gen III 4.8, 5.3 & 6.0L (Manual Throttle) Harness Std. Length



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- 60218 1999 2006 GM Gen III 4.8, 5.3 & 6.0L (Manual Throttle) Harness Extra Length
- \* 60017 This kit will have a #60217 harness as well as a custom flashed #12200411 ECM. See Page 53 for custom ECM and Flash options.

### Includes Component Connections For:

- A/C Request
- Air Pump
- Air Pump Relay
- Air Pump Solenoid
- Alternator
- Brake Switch
- Cam Position Sensor
- Canister Purge
- Canister Vent
- Crank Position Sensor
- Data Link Connector
- Driver/Pass Front O2 Sensors
- EGR Valve
- Engine Coolant Temperature
- Fan #1 Relay Ground ECM Activation
- Fan #2 Relay Ground ECM Activation
- Fuel Pump
- Fuel Pump Relay Fuel Pump Test
- Grounds

- Idle Air Control
- Ignition Coils
- Ignition Switch Signal
- Injectors Delphi Multec 2 Style
- Input Speed Sensor
- Knock Sensors
- Malfunction Indicator Lamp
- MAP Sensor
- Mass Airflow Sensor & Intake
- Air Temperature Sensor
- Output Speed Sensor Park/Neutral Switch
- ECM
- Reverse Lights
- Starter Starter Relay
- Tachometer
- Throttle Position Sensor
- Transmission
- VSS Output for Speedometer

60322 - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60217 harness. This harness provides connections to the Rear Oxygen Sensors, and the Fuel Tank Pressure Sensor.

60323 - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60218 harness. This harness provides connections to the Rear Oxygen Sensors, and the Fuel Tank Pressure Sensor.





# FUEL INJECTION HAPPESSES Accessories Gen III & Gen IV

#### GM Gen IV Tach Driver

The ECM used in GM Gen IV applications does not have a tach output wire to provide a tach signal to a tachometer. This small device converts the 5 Volt 58X crank sensor signal from any Gen IV GM V8 engine into a 12 Volt signal useable by most aftermarket and OEM tachometers. **60150** 

#### PERFECT Hi-Velocity - GM LS2,3, 7 Throttle Body (2006 & up)

This PERFECT HI-VELOCITY mechanical throttle body is polished black anodized billet aluminum for good looks and corrosion resistance. The throttle cable mechanism is located on the driver's side of the throttle body for a clean installation. Throttle body uses an LS1 Throttle Position Sensor (TPS) and Idle Air Control Motor (IAC). **65303** 

#### **Fuel Injector Connector Kits**

If you need to repair crushed or broken connectors on your factory harness or are converting your injectors found on modern multi-port fuel injection systems, Painless now offers this repair/change over kit. Contains terminals, seals, terminal locks, and connectors for 8 injectors. **60130 - EV1/Bosch Fuel Injector Pigtail Kit** 

### 60131 - EV6/US CarFuel Injector Pigtail Kit

#### Fan Relay Kit.

With 205°On/190°Off thermostat for GM Gen-III engine. M10x1.5 thermostat thread size. **30106** 

#### Weatherproof Fan Relay Kit

With  $205^{\circ}$  On/190° Off thermostat for GM Gen-III. M10 x1.5 thermostat thread size. **30127** 

#### GEN III, IV Truck Dual Activation/Dual Fan Relay Kit

Includes: (3) 40 Amp relays with mounting bases, (1) fuse holder w/ 70 amp fuse, Pre-terminated and printed wire harness, Thermostatic switch 205°F on/190°F off (thread size: 12x 1.5MM), mounting hardware, insulated terminals, instruction sheet. **30118** 

#### GEN III, IV Thermostat Only. (205° On/190° Off ). 30113

#### PCM Controlled Fan Relay Kits.

ContainS the necessary length wire and pinouts for those wishing to control their fan operation using the vehicle's power control module rather than thermostatically. **30109** 

# Waterproof version of the above PCM Controlled Fan Relay Kit. 30133

#### LS Engine Coil Extension Harness.

Includes two pigtails to allow relocating coils off the valve covers. Factory color coded wires and weatherproof connectors. One drivers side, one passenger side pigtail.

60127 - 24" 60128 - 36" 60129 - 48"

**ClassicBraid & PowerBraid EFI Kits.** Includes wire covering for most fuel injection installations. See page 73.

#### Universal ground strap kits:

4 Piece kit includes (1) 14" 1/0 heavy duty ground strap, (3) 11" 10 gauge ground straps and self tapping screws. **40140** 

Single 1/0 heavy duty 14" ground strap. 40141

Single 10 gauge heavy duty 11" ground strap and (2) 1/4 self tapping screws for mounting. **40142** 













# Fuel Injection Harnesses 1992-1997 5.71 LT1



This harness is designed for 1992-1997 5.7L LT1/LT4 & 4.3L (V8) L99 engines with a 4L60E transmission, using a '94-'97 ECM. This harness will not work with '92-'93 ECMs. These engines and transmissions were factory equipped in Camaro, Firebird, Corvette, Roadmaster, Impala and Caprice. These harnesses also include a VATS bypass module, Painless part #64024. The 4L60E transmission used must be a 1994+ which utilizes a 13th pin on the transmission connector. When using either of these harnesses on a '96 or '97 engine you must replace the coil, coil output wire and knock sensor with the parts from a '92 -'95 engine. Included with this harness is an 8 circuit modular fuse block, detailed step-by-step manual, and GM color coded wires with labels for easy installation.

# Fuse Block Circuits For:

Air Pump **Driver Side Injectors** Dual 40 amp Ignition Relays ECM & Data Link Connector Fuel Pump, ECM, & Mass Airflow Sensor Heated O2 Sensors, EGR, & Canister Purge Solenoid Malfunction Indicator Lamp & Brake Switch **Pass Side Injectors** Transmission

This harness also requires the following GM mating parts; ECM #16188051 or #88961150.

60502 - 1992-97 GM LT-1 Harness Std. Length 60505 - 1992-97 GM LT-1 Harness Extra Length

60113 - LT-1 Distributor Adapter (1994-96) Factory style replacement pigtail for the 1994 - 1996 LT1 Distributor.

60114 - LT-1 Distributor Adapter (1992-93) Factory style replacement pigtail for the 1992 - 1993 LT1 Distributors.

> 64024 VATS Anti-theft bypass for 1992-97 GM LT1 engines.

### Includes Component Connections For:

- Air Pump
- Air Pump Relay
- Alternator
- Brake Switch
- Canister Purge Solenoid
- Data Link Connector
- Distributor
- Driver/Pass Front O2 Sensors
- ECM
- EGR Valve
- Engine Coolant Temperature
- Fan #1 Relay Ground ECM Activation Tachometer
- Fan #2 Relay Ground ECM Activation Throttle Position Sensor
- Fuel Pump
- Fuel Pump Relay
- Fuel Pump Test
- Gear Indicator Switch
- Grounds

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- Idle Air Control
- Ignition Coil
- Ignition Module
- Ignition Switch Signal
- Injectors
- Intake Air Temperature Sensor Knock Sensors
- Malfunction Indicator Lamp
- MAP Sensor
- Mass Airflow Sensor
- Starter

- Transmission
- VATS
- Vehicle Speed Sensor
- VSS Output For Speedometer





# Fuel Injection Harnesses 1996-1999 5.01 & 5.71 Vortec



This harness is designed for 1996-1999 5.0L & 5.7L Vortec CMFI engines with a 4L60E or 4L80E transmission. These engines were found in 1996-1999 GM full-size trucks, vans, and SUVs. Harnesses do not include connections for the rear O2 sensors or fuel tank pressure sensor but are available separate, see below for more details. Included with this harness is an 8 circuit modular fuse block, detailed step-by-step manual, and GM color coded wires with labels for easy installation.

### Fuse Block Circuits For:

- Canister Purge, EGR Valve, & Mass Airflow Sensor
- Crank Position Sensor, Coil Module,
- & Ignition Coil
- Data Link Connector
- Dual 40 amp Ignition Relays
- ECM (C4), ECM (C1), & Malfunction
- Indicator Lamp
- Fuel Injectors
- Fuel Pump, Oil/Fuel Pressure, & ECM
- Heated O2 Sensors, Cam Position Sensor
- Transmission, Brake Switch, & ECM (C3)

#### This harness also requires the following GM mating parts; ECM #16244210 or 16229684 with V8 programing.

60212 - 1996-99 GM Vortec 5.0 & 5.7L V8 (CMFI) Harness Std. Length

#### 60213 - 1996-99 GM Vortec 5.0 & 5.7L V8 (CMFI) Harness Extra Length

**60320** - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60212 harness. This harness provides connections to the Rear Oxygen Sensors and Fuel Tank Pressure Sensor.

**60321** - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60213 harness. This harness provides connections to the Rear Oxygen Sensors and Fuel Tank Pressure Sensor.



- Alternator
- Brake Switch
- Cam Position Sensor
- Canister Purge Solenoid
- Canister Vent
- Data Link Connector
- Distributor
- Driver/Pass Front O2 Sensors
- ECM
- EGR Valve
- Engine Coolant Temperature
- Fuel Pump
- Fuel Pump Relay
- Fuel Pump Test
- Grounds
- Idle Air Control
- Ignition Coil

- Ignition Switch SignalIgnition Coil Driver
- Injectors
- Intake Air Temperature Sensor
- Knock SensorsMalfunction Indicator Lamp
- Mairunction ir
   MAP Sensor
- Mass Airflow Sensor
- Oil Pressure
- Starter
- Tachometer
- Throttle Position Sensor
- Transmission
- VSS Input
- VSS Output
- VSS Output For Speedometer



# Fuel Injection Harnesses 1996-1999 4.31 VG Vortec



This harness is designed for 1996-1999 4.3L Vortec CMFI engines with a 4L60E or 4L80E transmission. These engines were found in 1996-1999 GM full-size trucks and vans, S-10/S-15 trucks and SUVs, Chevy Astro Vans and Oldsmobile Bravadas. Harnesses do not include connections for the rear O2 sensors or fuel tank pressure sensor but are available separate, see below for more details. Included with this harness is an 8 circuit modular fuse block, detailed step-by-step manual, and GM color coded wires with labels for easy installation.

### Fuse Block Circuits For:

 Canister Purge, EGR Valve, & Mass Airflow Sensor
 Crank Position Sensor, Coil Module, & Ignition Coil
 Data Link Connector
 Dual 40 amp Ignition Relays
 ECM (C4), ECM (C1), & Malfunction Indicator Lamp
 Fuel Injectors
 Fuel Pump, Oil/Fuel Pressure, & ECM (C3)
 Heated O2 Sensors, Cam Position Sensor
 Transmission, Brake Switch, & ECM (C4) This harness also requires the following GM mating parts; ECM #16244210 or 16229684 with V6 programing.

60214 - 1996-99 GM Vortec 4.3L V6 (CMFI) Harness Std. Length

60215 - 1996-99 GM Vortec 4.3L V6 (CMFI) Harness Extra. Length

### Includes Component Connections For:

- Alternator
- Brake Switch
- Cam Position Sensor
- Canister Purge Solenoid
- Canister Vent
- Data Link Connector
- Distributor
- Driver/Pass Front O2 Sensors
- ECM
- EGR Valve
- Engine Coolant Temperature
- Fuel Pump
- Fuel Pump Relay
- Fuel Pump Test
- Grounds
- Idle Air Control
- Ignition Coil

- Ignition Switch Signal
- Ignition Coil Driver
- Injectors
- Intake Air Temperature Sensor
- Knock Sensors
- Malfunction Indicator Lamp
- MAP Sensor
- Mass Airflow Sensor
- Oil Pressure
- Starter
- Tachometer
- Throttle Position Sensor
- Transmission
- VSS Input
- VSS Output
- VSS Output For Speedometer

**60320** - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60214 harness. This harness provides connections to the Rear Oxygen Sensors and Fuel Tank Pressure Sensor.

**60321** - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60215 harness. This harness provides connections to the Rear Oxygen Sensors and Fuel Tank Pressure Sensor.



# Fuel Injection Harnesses 1986-1993 GM TBI



This harness is designed for 1986 - 1993 4.3L, 5.0L, 5.7L, 7.4L Throttle Body Injection engines. These harnesses will not work with a '94 or '95 ECM and will not operate a 4L60E transmission. These engines were factory equipped in GM full-size trucks, vans, and SUVs, S-10/S-15 trucks & suvs, Oldsmobile Bravadas, Chevy Astro vans, and Camaro/Firebird platforms. Harnesses do not include all the original connections for the original emissions but are available separate, see below for more details. Included with this harness is a detailed step-by-step manual, and GM color coded wires with labels for easy installation.

#### This harness also requires the following GM mating parts;

ECM #1227747, #16121154, or #88999146. Calpack #16060836, and a prom to match your engine: (4.3L) #16082087, (5.0L) #16139492, (5.7L) #16139566, (7.4L) #16128359. This Prom does not control any transmission or torque converter functions.

#### 60101 - 1986-93 GM 4.3L V6; 5.0,5.7 & 7.4L V8 TBI Harness Std. Length

#### 60201 - 1986-93 GM 4.3L V6, 5.0, 5.7 & 7.4L V8 TBI Harness Extra Length

- Note Installs which have an external coil distributor require:
- 60124 This pigtail will be required in order to connect the coil to the distributor.
- 60125 This pigtail will be required in order to connect the power to the coil and will provide a tach signal from the coil.
- 60119 454 EGR Adapter

### Includes Component Connections For:

- A/C Power Alternator
- Brake Switch
- Data Link Connector
- Distributor
- ECM
- EGR Valve
- Electronic Spark Control Module Engine Coolant Temperature
- Fuel Pump
- Fuel Pump Relay
- Fused System Power
- Grounds

- Idle Air Control
- Ignition Switch Signal (Fused)
- Ignition Timing Setting
- Injectors
- Knock Sensor
- Malfunction Indicator Lamp
- MAP Sensor
- O2 Sensor
- Oil Pressure
- Park/Neutral Indicator Switch
- Starter
- Throttle Position Sensor
- Torque Converter Clutch
- VSS

60310 - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60101 harness. This harness activates the Air Port solenoid Control. Air Diverter Solenoid and Canister Purge Solenoid.

60311 - In states/counties which require all the original emission equipment to be installed. Painless offers this emission harness for the 60201 harness. This harness activates the Air Port solenoid Control, Air Diverter Solenoid and Canister Purge Solenoid.

American Proud

American Made

# Fuel Injection Harnesses 1985-1989 GM V8 TPI (MAF)



This harness is designed for 1985 - 1989 Tuned Port Injected TPI 5.0L & 5.7L V8 engines using the Mass Air Flow system. These engines were factory equipped in Chevrolet Camaro and Corvette and were mated to either a 200-4R or 700R4 transmission. Harnesses do not include all the original connections for the original emissions but are available separate, see below for more details. Included with this harness is a detailed step-by-step manual, and GM color coded wires with labels for easy installation.

#### This harness also requires the following GM mating parts;

ECM #1227165, #16198259, or #88999194. 1985-1988 engines will require the use of prom #16082183, #16068654, or #1228109. 1989 engines will require prom #16133467 or #16150500.

#### 60102 - 1985-89 GM V8 TPI Harness (MAF) Std. Length

#### 60202 - 1985-89 GM V8 TPI Harness (MAF) Extra Length

Note - Installs which have an external coil distributor require:

- 60124 This pigtail will be required in order to connect the coil to the distributor.
- **60125 -** This pigtail will be required in order to connect the power to the coil and will provide a tach signal from the coil.

### Includes Component Connections For:

- A/C Power
- Alternator
- Brake Switch
- Cold Start Injector
- Cold Start Switch
- Data Link Connector
- Distributor
- ECM
- EGR Valve
- Electronic Spark Control Module
- Engine Coolant Temperature
- Fan Relay Ground
- Fuel Pump
- Fuel Pump RelayFused System Power
- Grounds
- Idle Air Control

- Ignition Switch Signal (Fused)Ignition Timing Setting
- Injectors
- Knock Sensor
- Malfunction Indicator Lamp
- Manifold Air Temperature
- Mass Airflow Burn off Relay
- Mass Airflow Power Relay
- Mass Airflow Sensor
- O2 Sensor
- Oil Pressure
- Park/Neutral Indicator Switch
- Starter
- Throttle Position Sensor
- Torque Converter Clutch
- VATS
- VSS

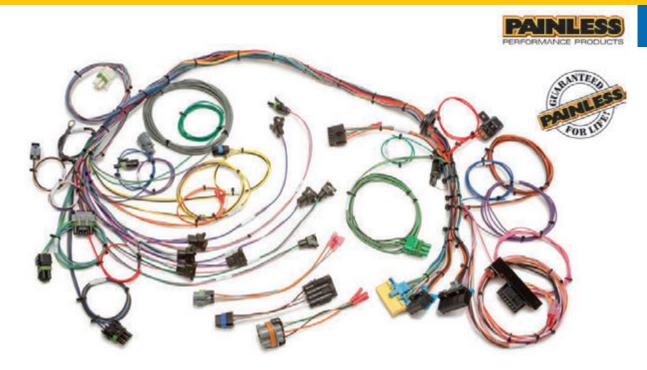
**60312** - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60102 harness. This harness activates the Air Port solenoid Control, Air Diverter Solenoid and Canister Purge Solenoid.

**60313** - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60202 harness. This harness activates the Air Port solenoid Control, Air Diverter Solenoid and Canister Purge Solenoid.

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68

# Fuel Injection Harnesses 1990-1992 GM V8 TPI MAP



This harness is designed for 1990 - 1992 Tuned Port Injected TPI 5.0L /5.7L V8 engines using the MAP speed density system. These engines were factory equipped in Chevrolet Camaro and Corvette and were mated to either a 200-4R or 700R4 transmission. Harnesses do not include all the original connections for the original emissions but are available separate, see below for more details. Included with this harness is a detailed step-by-step manual, and GM color coded wires with labels for easy installation.

#### This harness also requires the following GM mating parts;

ECM #1227730, #16198262, or #88999196. The EPROM broadcast code must match tire diameter, gear ratio, engine size, and transmission.

#### 60103 - 1990-92 GM V8 TPI Harness (MAP) Std. Length 60203 - 1990-92 GM V8 TPI Harness (MAP) Extra Length

Note - Installs which have an external coil distributor require:

60124 - This pigtail will be required in order to connect the coil to the distributor.

**60125 -** This pigtail will be required in order to connect the power to the coil and will provide a tach signal from the coil.

# American Made

Includes Component Connections For:

- A/C Power
- Alternator
- Brake Switch
- Data Link Connector
- Distributor
- ECM
- EGR Valve
- Engine Coolant Temperature
- Fan Relay Ground
- Fuel Pump
- Fuel Pump Relay
- Fused System Power
- Grounds
- Idle Air Control

- Ignition Switch Signal (Fused)
- Ignition Timing Setting
- Injectors
- Knock Sensor
- Malfunction Indicator Lamp
- Manifold Air Temperature
- MAP Sensor
- O2 Sensor
- Oil Pressure
- Park/Neutral Indicator Switch
- Starter
- Throttle Position Sensor
- Torque Converter Clutch
- VATS
- VSS

**60314** - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60103 harness. This harness activates the Air Port solenoid Control, Air Diverter Solenoid and Canister Purge Solenoid.

**60315** - In states/counties which require all the original emission equipment to be installed, Painless offers this emission harness for the 60203 harness. This harness activates the Air Port solenoid Control, Air Diverter Solenoid and Canister Purge Solenoid.

# Fuel Injection Harness Accessories TPI. TBI. Vortec



#### Park/Neutral Relay Kit

This kit uses the stock neutral safety switch to also provide for ECM park/neutral ground signal needed when installing factory-style fuel injection into older vehicles. For use with any aftermarket shifter or column mounted neutral safety switch. **60122** 

#### Neutral Safety/Backup Switch

This kit is engineered to perform as a neutral safety switch or a backup-light switch by using one of two trigger levers included. Fits GM Turbo 350, 400 and 700R4 transmissions. **80175** 

#### **HEI Replacement Power Pigtail**

For GM HEI distributor. 30809







#### **HEI Tachometer Lead**

For the GM HEI distributor. Includes OEM distributor connector and 6 feet of wire. **30813** 

GM Coil to Distributor Harness Connects coil to distributor on TBI & TPI engines. 60124

### GM Coil Power/Tach Pigtail

Connects power and tach to coil on TBI & TPI engines. 60125

#### Throttle Body Manifold Adapter

To convert from carburetion to TBI without having to replace your manifold. For square or spread bore base and accepts any 43 mm bore throttle body from 4.3L, 5.0L and 5.7L GM engines. 60118

#### VATS Anti-theft bypass For 1990-92 GM Tuned Port engines. 64023



ClassicBraid EFI Kit. Includes wire covering for most fuel injection installations. See page 73.

**PowerBraid Fuel EFI Kit.** Includes wire covering for most fuel injection installations. See page 73.

#### 700R4/200-4R transmission related items:

Vehicle Speed Sensor (TBI & MAF TPI). 2 pulse VSS for all TBI and Early TPI EFI systems. 60115

Vehicle Speed Sensor (MAP TPI). 4 pulse VSS for Late TPI and Early LT1 EFI systems. 60116

#### **Torque Converter Lockup Kits**

These kits for the 700R4 and 200-4R transmissions will control the lock up function of the torque convertor without the need of a VSS or any interaction with an ECM. The vacuum controlled switch and a 4th gear pressure switch supplied with this kit controls the torque converter lock up solenoid.

#### 60109 - 700R4 Transmission Torque Converter Lock-Up Kit

60110 - 200-4R Transmission Torque Converter Lock-Up Kit











## Fuel Injection Harnesses 1986-1995 Ford 5.01



This harness is designed for the 1986-1995 Ford 5.0 HO Mass Air Flow EFI engines. You must use the 1986-1993 MAF and Distributor. 1986-1989 1/2 must add MAF (mass air flow) sensor. 1994-1995 must modify TPS wiring and change distributor. Included with this harness is an 8 circuit modular fuse block, detailed step-by-step manual, and Ford color coded wires with labels for easy installation.

## Fuse Block Circuits For:

Check Engine Light Driver Side Injectors Dual 40 amp Ignition Relays EEC-IV Fuel Pump Relay (B+) Fuel Pump Relay (IGN) Heated O2 Sensors Mass Airflow, EVR, ISC Pass Side Injectors This harness also requires the following Ford mating parts; ECM #E9ZF-12A650-AA or NAPA part # XTP220.

60510 - 1986-95 Ford 5.0L Harness Std. Length 60511 - 1986-95 Ford 5.0L Harness Extra Length

Note: See page 49 for Mustang Switch Panels

## Includes Component Connections For:

- Alternator
- Barometric Pressure Sensor
- Data Link Connector
- ECM
- EEC Ground
- EEC Power Relay
- EEC Test
- EGR Vacuum Regulator
- EGR Valve
- Engine Coolant Temperature
- Fuel Pump
- Fuel Pump Relay
- Grounds
- Idle Air Control

- Ignition Coil
- Ignition Switch Signal
- Ignition Timing Setting
- Injectors
- Intake Air Temperature
- Malfunction Indicator Lamp
- Mass Airflow Sensor
- Neutral Safety Switch
- O2 Sensor
- Starter Relay
- Tachometer
- TFI Ground
- TFI Pigtail
- Throttle Position Sensor
- VSS



## Fuel Injection Harness 2003-2005 Cummins Diesel



This harness is designed to fit 2003 - 2005 5.9L common rail diesel Cummins engines using a standard transmission. Included with this harness is a 20 circuit weatherproof fuse block, detailed step-by-step manual, and factory color coded wires with labels for easy installation.

	Fuse Block Circuits For:
	Accessory
	DLC B+
	ECM Key-On
	Fuel Heater
	Fuel Pump
	Ignition Key-On
٦	Wastegate & Fan
٦	40 Amp Fuel Pump Relay
٦	40 Amp Fuel Heater Relay
٦	40 Amp Ignition Relays

### 60250 - 2003-05 Cummins Diesel Engine Harness 5.9L Manual Transmission Only

This harness also requires the following Dodge mating parts to complete;

1. ECM - This must be a factory ECM flashed for a manual transmission. This harness only fits ECMs from 2003-2005 Dodge trucks with the 5.9L Cummins engine.

2. IAT heater relays - This harness provides ECM output wires in order to turn on factory style IAT heater relays. You must purchase these relays or get them from a salvaged vehicle.

3. APPS - This harness supports the 2003 early Accelerator Pedal Position Sensor that was mounted on the front of the engine to the intake, the 2004 APPS mounted under the battery box and the 2005 late model Accelerator Pedal Position Sensor that was mounted on the accelerator pedal. You must use which ever APPS your ECM is programmed for. All APPS units are available from your local Chrysler dealer.

## Includes Component Connections For:

- 20 Amp Output
- 2003 2004 Fuel Pressure Drive
- 2005 Fuel Pressure Drive
- Accelerator Pedal Position Sensor Fuel Heater
- Alternator Regulator
- APPS 2004
- APPS Early
- APPS Late
- Battery
- Battery Temperature
- Brake Switch #1
- Brake Switch #2
- Camshaft Position Sensor
- Coolant Temperature Sensor
- Crankshaft Position Sensor
- Cruise Control
- CTS Early Signal
- CTS Late Signal
- CTS Signal

- Data Link Connector ECM
- Fuel Control Acutator
- Fuel Pressure Relay
- Fuel Pump
- Fuel Rail Pressure
- Harness 12v Activation
- IAT Heater Relay Activation #1
- IAT Heater Relay Activation #2
- Injectors
- MAP / Intake Air Temperature
- Oil Pressure
- Park/Neutral Safety Switch Pre-Turbo IAT/Pressure
- Radiator Fan Drive
- VSS Signal
- Wastegate Control Solenoid
- Water-In-Fuel Sensor

4. CTS - This harness only supports the late model style coolant temperature sensor.

OFUSE

5. LIFT PUMP - There are several options when choosing a lift pump. This harness provides a 30 amp power wire. It is relayed and ECM controlled.

A. Use a factory style lift pump; this may be a good budget minded option if this Cummins motor is transplanted into a vehicle that already had a diesel engine. Be sure to check volume and pressure from your factory lift pump if going with this option. B. 2003-2004.5 Cummins engines had lift pumps mounted to the back of the fuel filter /water separator.

C. Use an aftermarket lift pump.

6. RADIATOR FAN DRIVE - This is factory mounted to the fan shroud and controls the speed of the mechanical radiator cooling fan. This part can be taken from the donor vehicle or purchased new. If you may also choose to use aftermarket radiator fans.

7. VSS SIGNAL WIRE - This wire needs to receive a 5 Volt square wave signal from an ABS module or VSS signal modification module.

## ClassicBraid & PowerBraid



The perfect solution to clean up and protect the wiring in your vehicle. The laterally split design allows for easy installation over splices and

allows for easy installation over splices and inline connectors without exposing wires and cables. Resistant to the majority of chemicals and automotive fluids.

Available options in sizes from 1/8" to 2" in various lengths. They are also available in chassis and fuel injection kits containing everything you will need to cover your harness.



ClassicBraid & PowerBraid Kits Include Several Sizes And Lengths To Complete Most Applications.



**ClassicBraid** is a self-wrapping split braided wiring loom for that classic show car look! Its smooth texture and appearance will transform your engine bay, giving you that factory installed look.

The tightly woven construction provides excellent blockage against mud and dirt, while maintaining adequate drainage. The lateral split design has a minimum 25% overlap to allow for easy installation and optimum wiring protection.

Continuous Temperature Rating -94° to 257°F
 Melting Point 482°F



**PowerBraid** is a flexible, semi-rigid material, with a tough woven texture and appearance to enhance the look and protect the insulation of any electrical wire bundles or cables.

The woven construction provides good drainage while maintaining superior abrasion resistance. Laterally split with a 25% continuous overlap design allows for easy installation and optimum wiring protection.

Continuous Temperature Rating -94° to 257 °F
 Melting Point 482°F

70956 - 1/8" ClassicBraid (20 ft.) 70957 - 1/4" ClassicBraid (20 ft.) 70958 - 1/2" ClassicBraid (10 ft.) 70959 - 3/4" ClassicBraid (6 ft.) 70960 - 1" ClassicBraid (12 ft.)

**70970 -** ClassicBraid Chassis Kit Includes: 15' of 1/8", 60' of 1/4", 30' of 1/2", 10' of 3/4", 6' of 1"

Classic

**70971 -** ClassicBraid EFI Kit Includes: 23' of 1/8", 50' of 1/4", 12' of 1/2", 3' of 3/4", 8' of 1"

**70973 -** ClassicBraid 2nd GEN Camaro Kit Includes: 41' of 1/8", 70' of ¼", 33' of ½", 2' of ¾", 2' of 1" (for harness part #'s 20112/20113/20114)

 - 1/8" PowerBraid (20 ft.) - 1/4" PowerBraid (20 ft.) - 1/2" PowerBraid (10 ft.) - 3/4" PowerBraid (6 ft.) - 1" PowerBraid (12 ft.) - 2" PowerBraid (4 ft.)

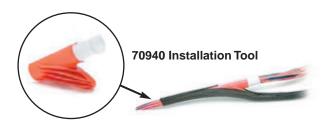
**70920 -** PowerBraid Chassis Kit Includes: 15' of 1/8", 60' of 1/4", 30' of 1/2", 10' of 3/4", 6' of 1"

**70921 -** PowerBraid Fuel Injection Kit Includes: 23' of 1/8", 50' of 1/4", 12' of 1/2", 3' of 3/4", 8' of 1"

**70922 -** PowerBraid Bronco Kit (for Part #10113) Includes: 38' of 1/8", 40' of 1/4", 23' of 1/2", 6' of 3/4"

**70923 -** PowerBraid 2nd GEN Camaro Kit Includes: 41' of 1/8", 70' of ¼", 33' of ½", 2' of ¾", 2' of 1" (for harness part #'s 20112/20113/20114)

- 70940 PowerBraid / ClassicBraid Tool 1 Inch (shown below)
- 70941 PowerBraid / ClassicBraid Tool Asst. Kit



# Jeep JK Accessory Control Panel





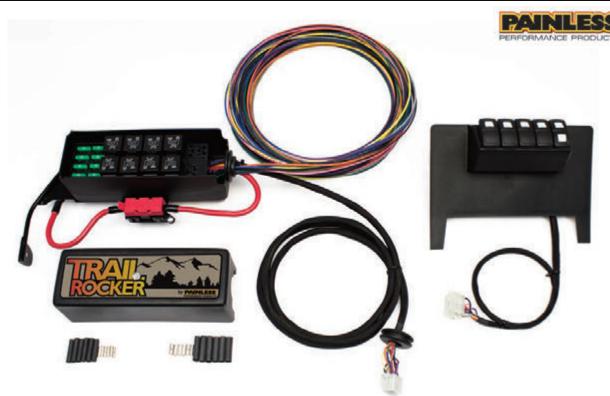


## INTRODUCING THE BRAND NEW TRAIL ROCKER JEEP JK ACCESSORY CONTROL SYSTEM

- **EASILY** control light bars, compressors and other off-road accessories!
- Weatherproof housing keeps your circuits safe and dry.
- Custom bolt-on powder coated bracket gives you a clean underhood install.
- Independent of the factory electrical system; won't void your factory warranty.
- Non-intrusive switch panel allows you to maintain a factory-installed look.



## Jeep JK Accessory Control Panel



### Jeep JK Dash Mount Accessory Control System

Looking to add accessories to your JK Jeep, but want to maintain that factory installed look? Introducing the brand new Trail Rocker from Painless, allowing you to control up to eight accessories on your JK Jeep! The heart of this kit is enclosed in the weatherproof housing that surrounds the power center with eight fuses and relays. Controlling it, are five prewired switches mounted in our custom dash panel for a clean factory installed look inside your Jeep.

The power center then provides you with all the necessary weatherproof connectors and wiring to connect to your Jeep accessories ranging from lights to air lockers. Easily installed with our detailed instructions and plug-n-play design.

- Control up to 8 accessories, (8) 30 amp fuses and (8) 30 amp relays
- Weatherproof housing around the power center and connections
- Custom bolt-on powder coated bracket for the power center
- Switch panel mounts 5 LED switches in a factory non-intrusive dash location

Independent of the factory electrical system and won't void the factory warranty

57000 - Trail Rocker System Jeep Wrangler JK 2011-14 57002 - Trail Rocker System Jeep Wrangler JK 2007-10 (Automatic Transmission Applications Only)





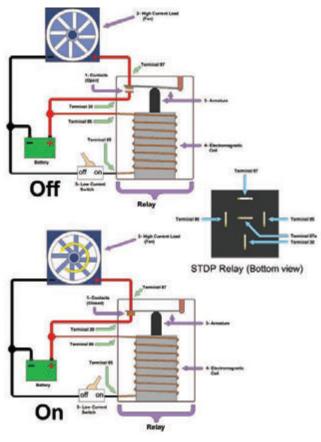
## Benefits Of Using Relays



### Why are Relays Important?

Relays have been used extensively in automobiles for many years. The main usage of relays in an automotive application is to control a high amperage component, such as a fuel pump or electric fans, with a low amperage circuit or switch, such as a fuel pump grounding circuit on an ECM. This diagram shows a representation of a simplified relay circuit, where a relay is used to turn on an electric cooling fan (2). When the low current switch (5) is switched to the "on" position the electromagnetic coil (4) is energized causing the armature (3) to move. When the armature is moved by the electromagnetic coil it causes the contacts (1) to close, completing the circuit between the battery and the electric cooling fan (2). When the switch is turned off, power to the electromagnetic coil is interrupted, causing the armature and contact to go back to their open position, turning the fan off.

There are several benefits of using relays in an automotive application. First, as stated earlier, you can turn on a high current component, such as an electric cooling fan that draws 70 amps of DC current, with a switch that has a much lower amperage rating or even an ECM with a circuit that simply provides a ground to turn the fan on and off. Another benefit of using a relay in your project is that the high amperage component is connected directly to the battery using a larger gauge wire, allowing the high amperage component to operate at full capacity. A good example of this benefit can be seen when using a relay in a halogen headlight circuit. A halogen headlight operated with a relay will be considerably brighter than one that has to rely on its power passing thru a headlight switch and the 14



ga. headlight wires that are used in most chassis harnesses. The final benefit of using a relay that we will discuss is circuit isolation. If you use an ECM to control a relay the relay isolates the ECM from any voltage spikes or feedback issues created by the high amperage component, helping to protect the sensitive semiconductors found inside the ECM.

### **Relay Base Port**

The same relay base we use on all our products. Made of High Impact ABS thermo plastic. Terminals provided. Use with 80130 and 80131 relays below. **80133** 

### **Replacement Relays**

- 80130 40 Amp single pole/single throw relay.
- **80131 -** 30 Amp single pole/double throw relay.
- 80135 Two single pole/double throw relays. N/C side 15 Amp N/O side 25 Amp
- 80136 Micro relay with base and terminals.

### **Relay Blocks**

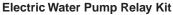
These relay block kits are ideal for powering accessories such as fuel pumps, water pumps, throttle stops, fan, nitrous solenoids. Choose from either a 3-Pack or 6-Pack of 40 amp relays. 3-Pack kit includes one 40 amp circuit breaker; 6-Pack includes two.

**30107 -** 3-Pack Relay Bank **30108 -** 6-Pack Relay Bank





Relay Kits



This electric water pump relay kit provides maximum battery voltage to maximize cooling efficiency and to protect the main electrical system from damaging amperage overloads. **50106** 

### Weatherproof Electric Water Pump Relay Kit

Perfect for the harsh conditions encountered off-road, this electric water pump relay kit provides complete protection from the elements and ensure reliable and dependable performance. These kits utilize heavy duty waterproof relays, weatherproof circuit breaker covers and extreme condition weatherproof shrinkable crimp-on terminals. **30132** 

### **Universal Fuel Pump Relay Kit**

A relay will prevent voltage drops at the fuel pump thus maintaining constant fuel pump pressure, and will prevent fuel pump amperage from damaging the electrical system. It's a good idea to relay your fuel pump for the street and a must when you're racing. **50102** 

### Weatherproof Universal Fuel Pump Relay Kit

Perfect for the harsh conditions encountered off-road, this fuel pump relay kit provides complete protection from the elements and ensures reliable and dependable performance. These kits utilize heavy duty waterproof relays, weatherproof circuit breaker covers and extreme condition weatherproof shrinkable crimp-on terminals.

30131

### Roll Over Safety Switch Kit

Automatically shuts off power to fuel pump in the event of a vehicle rollover. Recommended by many racing classes. Not recommended for off-road use. **80160** 

### Hot Shot Bump Switch / Amperage Booster

This switch allows you to turn over your engine from the engine compartment for adjusting valves. It also overcomes starting problems due to an overheated starter or worn out electrical system by boosting amperage to the starter solenoid every time the vehicle is started. **30201** 

### Hot Shot Amperage Booster

Designed to overcome starting problems due to an overheated GM style starter or worn out electrical system. Works by boosting amperage to the starter solenoid.















## F5 Fan Controller



### **F5 Electric Fan Controllers**

In the quest for increased control over engine temperature and lower parasitic power loss many people turn to electric cooling fans to solve their issues. One aspect of converting to electric cooling fans that is often overlooked is how to control the fans, until now! Most modern vehicles control their cooling fans by using their on-board computers to monitor parameters such as vehicle speed and a/c usage, not just coolant temperature. If you're looking for a solution to control your electric cooling fans that will monitor more than just coolant temperature, then the F5 Fan Controller is your answer. This solid-state pulse-width modulated controller has the ability to control your cooling fan speed from 50% all the way to 100% fan speed based on user programmable settings. Bellow you will find a list of features that sets our controller apart from other aftermarket cooling fan controlling solutions.

- Control over the engine temperature that your cooling fans turn on, between 160 and 235 degrees Fahrenheit.
- Your fan speed will fluctuate from 50% to 100% as your engine temperature fluctuates between the two user programmable temperature settings.
- Ability to run fans at 100% fan speed when your A/C compressor is running, regardless of engine temperature.
- Ability to turn fans off at a programmable vehicle speed, if vehicle speed sensor is used.
- Ability to override the controllers logic and turn the fans completely on or off at any time.
- Available in dual fan (two 35amp fans) or single fan (one 70amp fan) configuration.
- No external relays are required.
- Kit includes everything needed to install the F5 Fan controller on your vehicle. Includes controller, labeled vehicle integration harness, buttons, switches, 70 amp fuse, and compatible Delphi coolant temperature sensor.

### F5 Dual Fan Control for Two 35 Amp Electric Fans.

**30140** – F5 Dual Fan Controller.

### F5 Dual Fan Controller with Metric Sensor.

30142 - Same as 30140 except with a metric 12x1.5mm for Gen III and Gen IV GM engines.

### F5 Single Fan Control for One 70 Amp Electric Fan.

30141 – F5 Single Fan Controller.

### F5 Single Fan Controller with Metric Sensor

30143 - Same as 30141 except with a metric 12x1.5mm for Gen III and Gen IV GM engines.

## Electric Fan Control Kits

### A/C Activated Fan Relays

Want your cooling fan to kick in automatically when your A/C comes on? This A/C Activated Cooling Fan Relay kit is what you need. Your cooling fan will activate when the engine reaches the preset temperature of the thermostatic switch or when the A/C is turned on.

30114 - A/C activated fan relay with 200°F on /180°F off Thermostat 30115 - A/C activated fan relay with 185°F on /175°F off Thermostat

### Dual Fan / Dual Activation Cooling Fan Relay

Only a few minutes for the installation and your cooling fan will come on when the engine reaches the preset temperature of the thermostatic switch mounted in the engine head or when the a/c is turned on. Kit includes: (3) 40 Amp relays with mounting bases, (1) fuse holder w/ 70 amp fuse, Pre-terminated and printed wire harness, Thermostatic switch 195°F on/185°F off (thread size: 3/8"-18NPT), 1/2"NPT to 3/8"NPT adapter, mounting hardware, insulated terminals, detailed instruction sheet.

30116 - Dual Fan / Dual Activation Cooling Fan Relay 30117 - As Above with 185°F on/175°F off Thermostatic Switch.

### Fan-Thom Electric Fan Relay

Designed as inexpensive protection for your electric fan. Provides constant voltage, protects from voltage and amperage spikes and keeps fan from feeding back through the system. An absolute necessity if adding an on/off switch to your electric fan circuit.

30101

### Fan-Thom Electric Fan Relay

Don't want to probe your radiator? The Fan-Thom II comes with a threaded thermostat that screws into the engine block or manifold for a professional installation. Thermostat thread size: 3/8"-18 NPT fitting.

30102 - Fan-Thom Electric Fan Relay - 195° On/185° Off 30103 - Fan-Thom Electric Fan Relay - 185° On/175° Off

### Adjustable Electric Fan Thermostat Kit

Designed to allow a wide range of temperature adjustments for your electric fan. A bulb at the end of the capillary tube is inserted in the fins or attached to the top or hottest portion of the radiator. Use the adjustment knob to set a precise temperature desired for fan activation. The strong brushed stainless steel mounting bracket looks great. Complete kit includes thermostat, bracket, 30 amp relay, 30 amp circuit breaker for overall protection, wiring, terminals and hardware. Note: Temperature refers to the temp of the capillary tube, not the coolant temp. Specs: Temp range - 32 deg to 248 deg F, Accuracy: +/- 7.3 deg F, Differential: 7.3 deg +/- 3.6 deg F

### 30104 - Adjustable Electric Fan Thermostat Kit

30112 - Adjustable Thermostat Kit Without Relay.

### Replacement Thermostats 30110 - 195° On/185° Off 30111 - 185 On/175° Off



### Weatherproof Electric Fan Relay Kits

For the harsh conditions encountered off-road, these relay kits provide complete protection from the elements and ensure reliable and dependable performance. These kits utilize heavy duty waterproof relays, weatherproof circuit breaker covers and extreme condition weatherproof shrinkable crimp-on terminals.

### 30130 - Weatherproof Electric Fan Relay

30128 - Weatherproof Electric Fan Relay with 195° On/185° Off Thermostat 30129 - Weatherproof Electric Fan Relay with 185° On/175° Off Thermostat

### 70 Amp Fan Relay

This relay kit is designed for running high amp dual fans or Monster fan set-ups. **30100** 

(GEN III & IV Cooling Fan Products On Page 63)

















# Headlight Relay Kits

















### Halogen Headlight Harness

For maximum power from your headlights you must have the shortest possible distance between the power source and the bulbs. Some factory headlight wiring is not designed to handle high power Halogen Head-lights, especially when upgrading to a higher wattage. Running the power through the switch is even worse. Resistance in small gauge wire or in the switch will lower the output at the lamp. Be Safe! Our headlight harnesses draw power directly from the battery, through a relay, to the headlights, providing full power to your H4 conversion headlights or Halogen sealed beams. They can also be used to relocate head-lamps to a remote location (to accommodate a snow plow, for example). They are made with TXL high temp wire, weather resistant 30-Amp fuse, and two 40-Amp weather resistant relays capable of handling up to 150 watts. #30815 and #30816 are for use on vehicles with a 2-headlight system using dual filament sealed beams or H-4 headlight conversions. #30817 is for use on vehicles with a 9005 and 9006 bulb on each side.(Will not work on Toyota vehicles) \*Note:Vehicles using dual filament, halogen sealed beam

or H4 conversion type headlights use kit #30815.

30815 - For H-4 halogen bulbs \* 30816 - For 9004 and 9007 halogen bulbs 30817 - For 9005 and 9006 halogen bulbs

### Halogen Headlight Relay Kit

Designed to upgrade most American cars, from the late 1950's to the mid 1980's that have 4 headlights to H-4 style Halogen Bulbs. This kit eliminates the need to buy 2 kits & install/route redundant wiring. **30814** 

### **High Beam Headlight Relay**

Why do the low beams on 1988 on GM pickups and Suburbans low beams go off when the high beams are turned on? These kits will increase the intensity and improve the light spread pattern by keeping all four lights on in high beam mode. 30802 - High Beam Relay For 1988-98 GM full size trucks and SUVs \* 30821 - High Beam Relay For 1999-2002 GM full size trucks and SUVs \* 30822 - High Beam Relay For 2003-2006 GM full size trucks and SUVs 30823 - High Beam Relay For 1998 and later Chevy S10 and GMC T15 (No Kits For Other Brands Are Available)

\*Note 1: 1988-98 GM trucks including trucks with low-beam daytime running lights.

- \*\*Note 2: 1999-2002 GM trucks including trucks with low beam daytime running lights.
  - (Some '99 and later trucks wiring did not change. If your head-light wires are tan and green use kit #30802; if purple and yellow use kit #30821). For other GM applications contact our tech line.

- Note 3: Slight modifications may be necessary for some vehicles such as 88-91 Suburbans.

### Auxiliary Lighting Relay Kit

Install extra driving or fog lights easily and properly with our Auxiliary Light Relay Kit. Switch can be wired to turn lights on per state law requirements: Low beams & auxiliary lights, Highbeams & auxiliary lights, Auxiliary light operation only. Complete kit includes lighted switch, wiring harness, 30 amp relay and terminals. **30803** 

### Halogen Brake Light Relay Kit

When upgrading tail lights to halogens, always use a relay. This kit gives you everything you need to protect your wiring and switches. **30105** 

eC'

ar

### LED Flasher Upgrade

If you've upgraded to LED type lighting, this relay is the correct flasher to handle the job. **80230** 

## H4 Headlight plugs

H4 Headlight plugs. Preterminated with butt connectors for easy attachment. Perfect for replacement of worn original connectors. **80300 -** 2 per package

80

## Perfect TORC Transmission Controller



### PERFECT TORC Transmission Controller

The PERFECT TORC Transmission Controller System is the most reliable, well designed, vibration resistant, economical and simple to program transmission control system on the market. It was designed for ease of installation, even with little or no electrical or programming experience.

### 66501 - PERFECT TORC 4L60-5E/4L80-5E Transmission Controller

### **PERFECT TORC Transmission Controller features:**

- User Friendly Software w/ USB Cable Included
- Compatible with all current versions of Windows.
- Simple "Initial Setup Wizard"
- Base Calibrations for each Transmission Type
- Two Separate Shift Tables
- A digital display on the controller to allow for on-board diagnostics and basic tuning.
- Supports paddle shifting or simple push button shifting.
- Ultra simple method to calibrate signal for aftermarket speedometers to be accurate.
- The harness included in this kit is made with our 600 volt, 257°F, TXL abrasion resistant wire and is covered in our Power Braid abrasion and heat resistant wire loom.

This stand-alone electronic transmission controller will run your four speed automatic overdrive GM transmissions. These include the 4L60E, 4L65E, 4L70E, 4L80E and 4L85E GM transmissions. It can be installed with carbureted engines, fuel injected engines and diesel engines. The systems control of the transmissions shift points, shift firmness and shift quality are all based off of two basic inputs: TPS (Throttle Position Sensor) and VSS (Vehicle Speed Sensor). These are two very simple to obtain signals on almost all project vehicles built today.

The included User-Friendly Software has an "Initial Setup Wizard" to walk you through and simplify the most important key elements to achieve a nicely shifting transmission. Once the correct information has been entered into the initial setup wizard and the calibration has been written to the controller your transmission will have a good base calibration to allow you to go for your first drive.

### The "Key Elements" are:

- 1. Selecting what transmission type you have.
- 2. Whether you are running the stock gear ratios inside the transmission or not. Most setups run the stock gear ratios.
- 3. What your rear axle gear ratio is.
- 4. What your rear overall tire diameter is.
- 5. Measuring both your Idle and W.O.T.(Wide Open Throttle) throttle position sensor voltages and teaching the software what they are.
- 6. Setting up your Torque Convertor Clutch Settings.
- 7. Choosing a 2nd gear to 1st gear downshift mile per hour
- 8. Choosing a maximum 1st gear to 2nd gear upshift rpm. \*This is the RPM in which the controller will FORCE the transmission to upshift to protect against over revving your engine.
- 9. Setting up the output signal for an electronic speedometer. This system allows the signal to be offset manually to make synchronizing an aftermarket speedometer to read the correct miles per hour.



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# LSx Gauge Controller / Interior Accessories



### Painless LS Gauge Control Module

Are you running a modern LSx drivetrain in an older vehicle? If so, you have probably contemplated how you are going to run all of your aftermarket gauges. Up until now your only option was to purchase all the sensors you needed individually and install them to run just the gauges, even though your modern LSx drivetrain already has the necessary sensors integrated into its computer control systems. If running redundant sensors seems a bit...well... redundant, then the LS Gauge Controller is just the product you need. This module uses the infor-



mation that is already available through your OBDII port, eliminating the need to run duplicate sensors for your various gauge functions. This information is communicated through a system called the "Controller Area Network", or CAN for short. Once the Gauge Controller Module has been connected to the CAN system you will have the ability to run most aftermarket speedometer, tachometer, coolant temperature, oil pressure, and fuel level gauges. The Gauge Controller Module takes the raw data from the CAN system then converts it to a simple user programmable signal for your aftermarket gauges. The module is compatible with all gas engine drivetrains from General Motors that are 1996 and newer. All of those will support speedometer, tachometer, and coolant temperature. Only select applications will also support oil pressure and fuel level.

### 60650 - Gauge Control Module











### **Universal Gauge Harness**

If you want to keep your under-dash area organized or you think that you need to remove gauges from time to time then you need to install our universal gauge harness. It will connect all major brand gauges including Auto Meter and VDO and works with most dash layouts and sizes. Harness includes wiring for turn signals and high beam indicator light.

30301 - Universal Gauge Harness for Cable Driven Speedometer. 30302 - Universal Gauge Harness for Electric Speedometer.

### **GM Column & Dimmer Switch Pigtail**

Original factory connectors to replace worn out or damaged connectors for early GM keyed steering columns. GM color-coded wires are ready to connect into your existing harness. Includes: two keyed ignition switch pigtails, one turn signal pigtail with two connectors; one dimmer switch pigtail. Wire length: 12 Inches. **30805** 

### **GM Column Installation Kit**

All the plugs and terminals for your early GM keyed steering column in one kit. Contains two ignition switch connectors, two turn signal connectors and one dimmer switch connector and terminals for each. **30806** 

### **Universal Intergrated Turn Signal Kit**

A common problem faced by rodders and kit car builders is where to mount the turn signal switch since many aftermarket steering columns are not designed to accommodate the necessary wiring and switches. Problem solved with this new Integrated Turn Signal Kit from Painless. The toggle switches for both turn signals and hazards can be mounted anywhere. Because the kit is designed to be an integrated system, turn signals will work in conjunction with brake lights. **30120** 

### **Ceramic Voltage Reducer**

The perfect solution for a 6-volt heater or other 6-volt accessory that must be used with your 12-volt electrical system. Carries 4-amp maximum current, but can be run in parallel to increase load capacity. **40027** - Not to be used with electrical gauges.



BA

 1/8"
 Indictator Lights 80200 - Amber, 80201 - Red, 80202 - Green

 5/16"
 Indictator Lights 80203 - Amber, 80204 - Red, 80205 - Green, 80206 - Blue

 1/2"
 Indictator Lights 80208 - Amber, 80209 - Red, 80210 - Green, 80211 - Blue

 Check Engine Light 80207 - Amber with engine logo

82

# Interior Accessories

Headlight Switch with Plastic Knob - A 80154 - Four position; off, park, low beam and high beam.

Headlight Switch with Aluminum Knob - B 80151 - 3 position; dash light dim, no dome light control.

Dimmer Switch - C 80150 - GM type foor mounted dimmer

Universal Ignition Switch - D 80153 - Dash mounted ignition switch w/two keys.

Headlight Switch with GM Style Black Knob - E 80152 - 3 position; dash light dim and dome light control.

**Replacement Headlight Switch kit - F 80120 -** 3 position headlight switch, a floor mounted dimmer, and two GM style grounding door jam switches.

### **Replacement Switch Kit - G**

**80121 -** One 3 position headlight switch, one floor mounted dimmer, two GM style grounding door jam switches, and one universal ignition switch with keys.

Push Button Starter Switch - H 80503 - With cover

### Universal Windshield Wiper Switch - I

**80173 -** Three position switch operates 2-speed wiper motor with on-off and washer function.

Hydraulic Brake Light Switch - J 80171 - 1/8" Pipe thread fitting. 60 - 120 psi 1/8" - 27NPTF

### Brake Light Switches - K

80172 - 2 Terminal switch 80176 - 4 Terminal switch

Low Pressure Brake Light Switch - L 80174 - Comes complete w/plug-in pigtail.60 - 120 psi 1/8" - 27NPTF

GM Style Jamb Switch 80170



### Jamb Tac Wireless Contact Kits

Jamb Tac keeps door jambs looking neat and free from wires. These heavy duty solid brass contacts handle up to 60 amps per circuit. Mounts anywhere in the doorjamb. Kits are complete with connectors, instructions and mounting template.

(Note that opening the door breaks contact - your power windows, door locks or speakers will not operate with the door open).

- 40021 Jamb Tac 1-Wire Contact Kit
- 40022 Jamb Tac 2-Wire Contact Kit
- 40023 Jamb Tac 3-Wire Contact Kit
- 40024 Jamb Tac 4-Wire Contact Kit
- 40025 Jamb Tac 4-Wire Contact Kit w/dome lamp switch

### GM courtesy light kit

Includes: wires, door jamb switches and light sockets to install courtesy lights inside your vehicle.

- 30702 GM Courtesy Interior Light Kit with Switches
- 30708 Courtesy Light Kit For 1967-72 Chevy/GMC Trucks

### 30710 - Universal Courtesy Light Kit

Universal Kit Includes: Wires and light sockets to install courtesy lights inside your vehicle.









## Phantom Key Push Button Start System



### Phantom Key Push Button Start System

Add the cool new technology of keyless ignition to your old hot rod, muscle car or 4X4. Here's your best option for both added security and this new creature comfort from the automotive aftermarket world.

The Painless Phantom Key allows for the total replacement of most current ignition switches. Simply remove your existing ignition switch, install the backlit stainless pushbutton and allow the Phantom Key's Module/Relay center do all the work for you. Plus it adds options such as a trunk popper channel, door lock and unlock, dome light on and off along with the added security of not having any key tumblers for a thief to pick.

When you are more than 20 feet away from your vehicle, the LED backlit push button switch will blink showing there is a security device in the vehicle, warding off potential thieves.

When you are within 20 feet of your vehicle, the blinking LED will turn solid. Push the unlock button on the key fob to unlock your doors, climb into the vehicle, push the brake pedal and finally push and hold stainless Phantom Key button to start the engine.

The key fobs have both lock and unlock buttons which function as follows: Pushing and holding the lock button will trigger the 3rd channel to pop the trunk or turn the dome light on and off. Pushing and releasing the lock button will only lock the doors and pushing and releasing the unlock button will unlock the doors.

The key fobs can be programmed to be in what's called "automatic mode" which is where the system will automatically enable when the fob is within about 20 feet of the vehicle OR they can be programmed to be in what's called "manual mode" where the unlock key must be pushed to enable the system.

Phantom Key fob may also be used to unlock your vehicle's OEM power door locks.

55000 – Phantom Key Push Button Start with Stainless....... White Backlit 22mm Switch 55001 – Phantom Key Push Button Start with Stainless....... Blue Backlit 22mm Switch 55002 – Phantom Key Push Button Start with Stainless....... Red Backlit 22mm Switch

## Charging System Accessories



### Ultra High Output Alternator Wire Kit - Up to 190 Amps

In most cases, your factory wiring or even a Painless Performance Chassis Harness is only rated for an alternator with 80 amps or less. Connecting your new high amperage alternator using too small a charge wire will lead to inadequate charging and/or over heating of the charge wire, possibly leading to a fire. The Ultra High Output Alternator Kit will let you safely, reliably, and "Painlessly" install an alternator with up to 190 charging amps. The kit includes a high amp inline fuse with protected fuse holder, all necessary ring terminals, heat shrink, and a detailed set of diagrams and step by step instructions to provide a professional installation. 30700

### High Amp Alternator Wire Kit - Up to 100 Amps

For alternators that produce more than 65 amps, this add-on kit provides heavier gauge wiring with connectors to complete the high output alternator installation process quickly, easily and safely. 30709





Resistor included.

age sensing wire.

**Delco Alternator Pigtail** 

30705

30706

Kit contains everything needed to connect to a 3G alternator: 8' of 6 gauge charge wire, pre-terminated harness with the correct connectors, 150 amp inline fuse, an assortment of weather proof splices, and detailed color instructions. 30831

Pigtail for CS 130D Internal Fan Alternator.

A replacement pigtail using the factory original plug for the popular "Delcotron" alternator, preterminated with the ignition input wire and volt-

Alternator Photos For Reference Only









Alternator Photos For Reference Only









A replacement pigtail using the factory original plug for the late style or "CS" style GM external fan alternator. Resistor included. 30707

**CS Style GM Alternator Pigtail** 

### Diode Kit

Used for 10SI & 12SI Alternators. 30720

### **Electrical System Surge Protector**

Voltage spikes can cause damage to various components in your vehicle's electrical system. This easy to install device clips the spikes at 14.5 volts to protect sensitive electrical accessories. Installs between positive and negative battery terminals. 40030



## Battery Management Systems



### Products for Adding a Battery to Your Vehicle.

Before you can successfully add an additional battery to your vehicle, it's best to have an understanding of the common terminologies that are thrown around in the battery world. These common terminologies are:

**Battery Isolator:** A battery isolator has two major jobs: 1) Charging of multiple batteries at one time and 2) Ensure multiple batteries are all receiving the same level of charge. These are commonly used on RV's, Boats and Off-Road vehicles to assist in the proper charging or "maintaining" of a vehicles multiple batteries by a single alternator in most cases.

**Battery Separator**: A battery separator has two major jobs: 1) Based on the load on a vehicles main battery a separator will allow energy to be pulled from a reserve battery to assist the main battery and 2) establishes a hierarchy between the main and reserve batteries. It will only charge the reserve battery after the main battery is fully charged.

**So, what's the difference?** – The difference between the two involves the free flow of current and if the current is mechanically switched or switched solid-state.

Isolators use a form of electrical current "check valve", commonly referred to as a diode to only allow current to flow in one direction. This prevents the batteries from discharging into each other when one battery has a lower charge than the other. The biggest advantage to this setup is allowing one source of power to charge multiple batteries.

Separators use electric solenoids to control when two or more batteries are connected to each other. They monitor a vehicles main battery voltage to determine when the reserve battery is needed to help supply a load applied on the main battery. Most of the time, they specifically are monitoring a drop in voltage over time on the main battery to determine when the reserve battery is needed. Once the load is either removed or lightens up on the main battery a separator will disconnect the reserve battery totage has reached a predetermined level.





## Battery Management Systems



### Digital Power Manager - 500 Amp with Jump Start

Whether you're using extra driving lights, aftermarket stereo systems, or winches, this dual battery controller eliminates any second guessing when installing a dual battery setup. This Digital Power Manager is a true 500 AMP Jump Start and a 500 AMP Continuous Duty Cycle weatherproof solid state control unit that controls a high amperage solenoid to automatically combine a reserve battery when a large load is placed on a vehicles main battery. The DPM is designed to maintain the charge in the reserve battery for emergency vehicle jump starting when the main battery voltage is too low to start your vehicle. The DPM also establishes a charging priority of the batteries by not maintaining or charging the reserve battery unless the main battery voltage is above 12.5 volts.

### **Remote Indicator States:**

- Indicator Light Solid On Main Battery and Aux Battery are Connected Together
- Indicator Slow Flash Charging Reserve Battery
- Indicator Fast Flash Reserve Battery is Below 11.6 Volts
- Indicator Off Painless DPM Idle

### Digital Power Manager - 500 Amp w/Jump Start - w/16ft Battery Cables

Included in this kit: Digital Power Manager, High Amperage Solenoid, 500 AMP MEGA Fuse, Override Switch, Remote Indicator Light, Heat Shrink, Mounting Bracket, and all the Required Fittings & Terminals. **40122** 

### **Digital Power Manager - Winch Relay Kit**

Designed to be a simple add on to our 500amp DPM kit. This relay kit will allow you to control your winch with our DPM.

40123

### 40126 - Jeep CJ DPM Dual Battery Kit

This 500 amp Digital Power Manager & Custom Battery Tray provides you with a direct replacement battery tray integrated with our dual battery controller for your '76-86 CJ Jeep. The DPM is a 500AMP Jump Start & continuous duty cycle weatherproof solid state control unit. While the tray is a powder-coated drop in replacement.

Includes New Bolt-In Replacement Battery Tray!



## Battery Management Systems



### 280 AMP Digital Power Manager

Are you running a reserve battery but don't need a full 500 amps of current handling capacity? If so you may want to consider this smaller 280 amp Digital Power Manager. This DPM has many of the same great features of our larger capacity DPM's (40122 & 40121) such as priority charging, battery isolation and automatic load sensing. This system is not a continuous duty cycle system and is best described as a battery "isolator" with some "separator" benefits. This system also includes the indicator light allowing you to monitor the status of the DPM.

40120 - 280 AMP Digital Power Manager

### 280 AMP Digital Power Manager with 500 AMP Jump Start

This kit has all the same functionality as our #40120, yet adds the ability to provide a total of 500 amps of jump starting current to assist with a partially drained main battery. This kit includes a push button momentary switch to mount on the dash for jump starting and a 250 amp solenoid. This kit is especially useful for vehicles that may sit for long periods of time without being restarted to charge the main battery.

40121 - 280 AMP Digital Power Manager w/500 AMP Jump Start



### 250 AMP Dual Battery Control System

These two kits come with a 250 amp solenoid, on-off-on toggle switch, red & green indicator lights and a preloomed harness. These kits continue to be a great product for those of you out there looking for the simple, manual operation of combining two batteries on a vehicle. Both batteries can be charged at the same time and connected for large loads based on the manually selected position of the included toggle switch. These kits do not monitor voltage or have any decision making circuits to handle the monitoring of voltage and load automatically.

40102 - 250 Amp Dual Battery Controller

40103 - 250 Amp Weatherproof Dual Battery controller







88

## Battery System Accessories

### **Remote Master Disconnects**

Whether complying with sanctioning body requirements, car show rules or simply for your vehicle's security, Painless has the right battery disconnect for you.

We offer two kits with 250 amp continuous duty solenoids for use with high amperage alternators. Kit #30204 uses a toggle switch to activate the solenoid. This switch can be hidden anywhere as a theft deterrent. Kit #30205 with Emergency Push Button is perfect for race applications as it allows installation of a large emergency push button in easy reach if you need to shut down your vehicle's electrical system in a hurry. Our #30206 kit with Mechanical Latching Solenoid is a simple and effective anti-theft deterrent for everyday vehicles. The 110 amp continuous duty solenoid is activated by an easy to hide momentary push button. No risk of accidentally draining your battery with this latching solenoid.

- 30204 Remote Master Disconnect Kit
- **30205 -** Remote Master Disconnect with Emergency Push Button
- **30206 -** Remote Master Disconnect with Mechanical Latching Solenoid (Includes constant hot wire for computer or radio presets)

Replacement 250 AMP Solenoid for above remote disconnect kits 40112



80140 - Master Disconnect Switch 50710 - Master Disconnect Switch With Mount Plate

### **Power Distribution Blocks**

Clean up that mess of power connections on your battery's terminals. These rugged 8-point power distribution blocks allow neat and safe connection points for electrical accessories.

- 80114 Distribution Block Red
- 80115 Distribution Block Black
- 80116 Distribution Block Set 1 Red, 1 Black

### Junction Block

Two isolated 10 gauge posts provide a perfect way to attach two large gauge wire connections. **80112** 

### **Remote Battery Junction Blocks**

Through-bulkhead terminals with one positive (red) and one negative (black) 3/8" connector stud for battery cables. **40106** 













## Battery System Accessories



### Remote Battery Cable Kit - 16' Red & 3' Black

Only the highest quality components go into our remote battery cable kit. Comes complete with 16 feet of red #1 gauge positive battery cable and three feet of black #1 gauge battery cable, both with heavy duty battery terminals already installed.133 strand copper cable with lightweight abrasion resistant insulation capable of handling over 250 amps. Kit includes side post adapters and high amp crimp ring terminals.

40100

### Remote Battery Cable Kit - 16' Red & 16' Black

Allows both positive and negative cables to be attached to the engine for maximum starting current. These two16 foot, #1 gauge cables help prevent voltage drop to the engine. Eliminates the need for additional heavy cable connections between the engine and frame.

40105

### Universal ground strap kits:

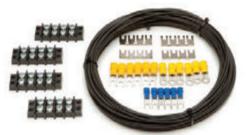
4 Piece kit includes (1) 14" 1/0 heavy duty ground strap, (3) 11" 10 gauge ground straps and self tapping screws. **40140** 

Single 1/0 heavy duty 14" ground strap. 40141

Single 10 gauge heavy duty 11" ground strap and (2) 1/4 self tapping screws for mounting. **40142** 

### **Fiberglass Body Ground Kit**

For proper electrical grounding of any vehicles with fiberglass bodies such as Cobra Kits, Bronco or Jeep reproduction bodies, Sandrails or Crawlers. **40026** 













# Universal Fuse Blocks

### **Universal Style Pre-Wired Fuse Block**

Use this 14 Circuit OEM Universal style pre-wired fuse block to replace your existing fuse block or as a starting point for custom wiring. All you have to do is terminate each circuit wire and attach it to the fuse block. Pre-wired and labeled for the following circuits: Starting, Air conditioning /heat, gauges/dash instruments, brake lights, headlights, coil, horn, dome light, radio, electric fan, turn signals, emergency flashers, wipers and alternator. Kit includes: mounting bracket, fuses, flashers, horn relay, terminals, and full instructions. (No wire included) **30001** 

### **Universal Style Pre-Wired Fuse Block**

Contains the same 14 circuits as above but also includes 6 additional circuits for power windows, power door locks, electric fuel pump, backup lights, cigarette lighter, and a optional accessories. (No wire included). **30003** 

### Race/Pro Street Pre-Wired Fuse Block

This is a Race/Pro Street version of our #30001 fuse block designed with 16 circuits to make your race car street legal. Just terminate your wiring and attach it to the fuse block. Pre-wired and labeled for the following circuits: electric fuel pump, Gauges/Radio, electric water pump, electric fan, brake lights, wipers, headlights, turn signals, emergency flashers, horn, coil, dome light, alternator, starting, and two optional accessories. Kit includes: 10-gauge alternator lead, mounting bracket, fuses, flashers, horn relay, terminals, fusible link, and step by step instructions. (No wire included) **50101** 

### Weatherproof Universal Style Pre-Wired Fuse Block

This weather proof 20 circuit universal fuse block is perfect when you need to replace an exposed unreliable fuse block with something rugged and dependable. It comes fully assembled with wire leads that you can connect to your existing wiring and is completely sealed from the elements for trouble free performance. Includes mounting bracket. **30004** 

### Add-On Fuse Block

This 4 circuit fuse block is great for any vehicle where additional circuits are needed beyound the main fuse block. Ideal for in-line wiring applications, such as trailer wiring or when adding vehicle accessories. Uses blade type automotive fuses up to 30 amps. (No wire included) **30002** 

Midi-Fuse Assembly 100 amp Midi-Fuse and fuse cover. 80000

Maxi-Fuse Assembly 70 amp Maxi-Fuse and fuse cover. 80101

70 Amp Maxi-Fuse only 80102













## Fuse Blocks Cirkit Boss Add-On Fuse Blocks



Don't go unprotected! Electrical accessories can send voltage spikes through your system, damaging everything from light bulbs to computers. The safe way to add electrical accessories is with CirKit Boss, the first circuit isolating auxiliary fuse blocks that provide both constant and ignition hot circuits. No more tapping into an existing wire or into a spare circuit at the fuse block. Using these add-on, relay activated fuse blocks is the safe way.

Only a small activation wire from any ignition source is needed to turn on the relay that turns on the fuse block. All CirKit Boss models are made using TXL cross link polyethylene wire rated to 125 °C (275F) degrees. All harness wires are 48" long and factory machine terminated. CirKit Boss includes an in-line circuit breaker, relay, mounting hardware, & terminals. Protects your OEM warranty. Easy to install. Safely adds ignition hot and constant hot circuits.

### 3-Circuit Auxiliary Fuse Block

Perfect For Use Under Normal Conditions. (Shown top) 1 constant-hot and 2 ignition-hot circuits. Uses one 40 amp relay. **70103** 

### 3-Circuit Auxiliary Fuse Block

Perfect For Use Under Normal Conditions. 3 ignition-hot circuits. Uses one 40 amp relay. **70113** 

### 3-Circuit High Amperage Auxiliary Fuse Block

3 ignition-hot circuits with a maximum total amperage of 70 amps. Uses one 70 amp relay.

### 70114

### 3-Circuit Weather Resistant Auxiliary Fuse Block

Mounts under hood in unprotected areas. Extreme use where moisture /dust resistance is important. 1 constant-hot and 2 ignition-hot circuits. Uses one 40 amp relay. (Includes cover for fuses) **70203** 

### **3-Circuit Weather Resistant Fuse Block**

Mounts under hood in unprotected areas. Extreme use where moisture /dust resistance is important. 3 ignition-hot circuits. Uses one 40 amp relay. (Includes cover for fuses) **70213** 

### 7-Circuit Auxiliary Fuse Block

3 constant-hot and 4 ignition-hot circuits. Uses one 40 amp relay. **70107** 

### 7-Circuit Auxiliary Fuse Block

7 ignition-hot circuits. Uses two 40 amp relays. **70117** 

## 7-Circuit Heavy Duty Auxiliary Fuse Block

7 ignition-hot circuits. Uses two 70 amp relays. **70118** 

### 7-Circuit Weather Resistant Fuse Block

3 constant-hot and 4 ignition-hot circuits. (Shown middle) Uses one 40 amp relay. (Includes cover for fuses) **70207** 

### 7-Circuit Weather Resistant Fuse Block

7 ignition-hot circuits. Uses two 40 amp relays. (Shown bottom) (Includes cover for fuses) **70217** 

### Auxiliary Fuse Block Weather Resistant Covers

**70120 -** Cover only - 3 circuit **70121 -** Cover only - 7 circuit



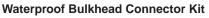




ECT







This 22-pin bulkhead connector kit allows for custom wiring at the firewall. Includes all necessary terminals and connectors. Uses 18-16 gauge wire. 40130



### Weatherproof Connector Kit

Use this weatherpack connector kit where rain, dust or other elements may affect electrical connections. Each kit includes a male and a female connector and the appropriate number of terminals. NOTE: Accepts only 14-16 gauge wire.

70401 - 1 Wire Kit (2pack) 70402 - 2 Wire Kit 70403 - 3 Wire Kit

70404 - 4 Wire Kit 70406 - 6 Wire Kit



### **Quick-Connect Terminal Kit**

Use this quick-connect terminal kit to make your own locking quick connect plugs easily and quickly. Each kit includes a male and a female connector and the appropriate number of terminals. NOTE: Accepts only 14-20 gauge wire.

40006 - 2 Wire kit	
40007 - 3 Wire kit	
40008 - 4 Wire kit	
40009 - 6 Wire kit	

40010 - 9 Wire kit 40011 -12 Wire kit 40012 -15 Wire kit

### 20 Amp Weatherpack Fuse Loop

Just cut it and splice inline with whatever circuit you need to add a fuse on.



### **Professional Quality Wire Crimpers**

Professional grade "Roll Over" wire crimpers. Perfect for for crimping uninsulated terminals and Weatherpack terminals. These crimpers "roll over" the terminal end into the wire strands for optimal contact, instead of just flattening the metal. 70900







# Bulk TXL Wire & Terminals



When reliability and performance can't be compromised you want this wire - not the inexpensive primary wire you find in most parts stores, this the wire we use on our own harnesses. Stranded real copper core. Cross-linked polyethylene insulation for superior abrasion resistance. Withstands over 125°C (275°F). Exceeds OEM specifications for under hood applications. Thinner polyethylene covering means lighter weight and much easier routing.

<b>8 GAUGE WIRE STOCK</b>				
COLOR	25 FT.			
Red	70690			

 10 GAUGE WIRE STOCK

 COLOR
 25 FT.

 Red
 70700

 Black
 70701

### **12 GAUGE WIRE STOCK**

COLOR	25 FT.	50 FT.
Red/Blk	71710	70710
Orange	71711	70711
Purple	71712	70712
Red	71714	70714
	71715	
Black	71716	70716

### **14 GAUGE WIRE STOCK**

COLOR	25 FT.	50 FT.
Red	71800	70800
Black	71801	70801
Orange	71802	70802
	71803	
Green	71804	. 70804
Blue	71805	70805
White	71806	70806
Grey	71807	70807
Lt.Blue	71808	70808
Lt.Green	71809	70809
Pink	71810	. 70810
Brown	71811	. 70811
Purple	71812	. 70812
Tan	71813	. 70813
Tan/White	71814	. 70814
Grey/White	71815	. 70815
Black/White	71816	. 70816
	71817	
Yellow/Black .	71818	. 70818
Yellow/White .		70819

### **16 GAUGE WIRE STOCK**

COLOR	25 FT.	50 FT.
Lt.Blue		70830
White		70831
Blue		70832
Green/Blk	71833	70833
Green		70834

### **18 GAUGE WIRE STOCK**

COLOR	25 FT.	50 FT.
Lt.Blue/Blk	71850	70850
Purple/Blk	71851	70851
Purple/White .	71852	70852
Red/White	71853	70853
Orange/Blk	71854	70854
Green/Blk	71855	70855
Red	71858	70858
Blue	71859	70859
Lt. Blue	71860	70860
Brown	71861	70861
Green	71862	70862
Pink	71863	70863
Orange	71864	70864
Black/White	71865	70865
Black	71866	70866
Purple	71867	70867
	71868	



### 84 piece terminal assortment kit

You can trust Painless to give you only the finest American made quality terminals for the best connection possible. These terminals cost a little more, but they are worth every penny. **40060** 

### 67 piece weatherproof terminal assortment kit

The finest quality terminals money can buy. High grade copper, covered in special heat shrink that will not crack under high temperatures. Heat activated adhesive waterproofs the connection & relieves wire strain. Impervious to gas, antifreeze, battery acid, diesel fuel and saltwater. Easy crimp-on style. Exceeds all UL and CSA requirements. **40065** 

### Through-wall Grommets

7 piece assortment of through-wall grommets to make wiring installations safer and professional looking. **71901** 

## Circuit Block Covers

Protect your fuse block from dust while providing a clean look to your wiring installation with one of these molded fuse block covers.

- 12000 Cover For Painless 21 Circuit Blocks. (Will not fit 30001 or 50101)
- 12001 Cover For Painless 28 Circuit Blocks. (Will not fit 30003)







# Proiect Build Sheet

## PROJECT BUILD SHEET



	MAKE:	MODEL:
ENGINE YEAR:	TYPE/SIZE:	TRANSMISSION:
Chassis Harness #	(pages 9-47)	Fuse Block Cover: 12000 or 12001
Fuel Injection Harness #_	(pages 52-72)	
ECM #	(page 53)	
Race Switch Panel #	(pages 48-51)	
Fuse Block/Additional Cir	cuits:	(page 91-92)
Battery Cables (page 90): 40	<b>0100</b> (15' Red/3' Black) or <b>40105</b> (16'	Red/16' Black)
Ground Straps (page 90): 40	0140 (engine/chassis kit), 40141 (1/0	engine strap), or <b>40142</b> (single chassis strap
lunction Blocks:		(page 89)
Sattery Disconnect #	(page 89)	
Oual Battery Controller #_		(pages 86-88)
-	sis Kit, page 73) <b>: 70920</b> (PowerBraid) c	
Classic/Power Braid (Chas	sis Kit, page 73) <b>: 70920</b> (PowerBraid) o	
Classic/Power Braid (Chas	sis Kit, page 73) <b>: 70920</b> (PowerBraid) c Engine compartment Kit, page 73) <b>: 70</b>	or <b>70970</b> (ClassicBraid)
Classic/Power Braid (Chas (EFI/E	sis Kit, page 73) <b>: 70920</b> (PowerBraid) c Engine compartment Kit, page 73) <b>: 70</b>	or <b>70970</b> (ClassicBraid) <b>921</b> (PowerBraid) or <b>70971</b> (ClassicBraid) (pages 83)
Classic/Power Braid (Chas (EFI/E Switches: Gauge Harness (page 74): 3	sis Kit, page 73) <b>: 70920</b> (PowerBraid) c Engine compartment Kit, page 73) <b>: 70</b>	or <b>70970</b> (ClassicBraid) <b>921</b> (PowerBraid) or <b>70971</b> (ClassicBraid) (pages 83) t. speedo)
Classic/Power Braid (Chas (EFI/E Switches: Gauge Harness (page 74): 3 Courtesy Light Kit (page 83	sis Kit, page 73): <b>70920</b> (PowerBraid) of Engine compartment Kit, page 73): <b>70</b> <b>0301</b> (mech. speedo) or <b>30302</b> (elect) ): <b>30702</b> (2 wired sockets/ GM jamb s	or <b>70970</b> (ClassicBraid) <b>921</b> (PowerBraid) or <b>70971</b> (ClassicBraid) (pages 83) t. speedo)
Classic/Power Braid (Chas (EFI/E Switches: Sauge Harness (page 74): 3 Courtesy Light Kit (page 83 Headlight Relays #	sis Kit, page 73): <b>70920</b> (PowerBraid) of Engine compartment Kit, page 73): <b>70</b> <b>0301</b> (mech. speedo) or <b>30302</b> (elect) ): <b>30702</b> (2 wired sockets/ GM jamb s	or <b>70970</b> (ClassicBraid) <b>921</b> (PowerBraid) or <b>70971</b> (ClassicBraid) (pages 83) t. speedo) witches) or <b>30710</b> (2 wired sockets)
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Classic/Power Braid (Chas (EFI/E Switches: Gauge Harness (page 74): 3 Courtesy Light Kit (page 83 Headlight Relays # Fransmission Controller/L Electric Fan Relay/Contro	sis Kit, page 73): <b>70920</b> (PowerBraid) of Engine compartment Kit, page 73): <b>70</b> <b>0301</b> (mech. speedo) or <b>30302</b> (electric): <b>30702</b> (2 wired sockets/ GM jamb s 	or <b>70970</b> (ClassicBraid) <b>921</b> (PowerBraid) or <b>70971</b> (ClassicBraid) (pages 83) (pages 83) (st. speedo) witches) or <b>30710</b> (2 wired sockets) ) (pages 78-79)
Classic/Power Braid (Chas (EFI/f Switches: Sauge Harness (page 74): 3 Courtesy Light Kit (page 83 Headlight Relays # Fransmission Controller/L Electric Fan Relay/Contro Electric Water Pump Relay	sis Kit, page 73): <b>70920</b> (PowerBraid) of Engine compartment Kit, page 73): <b>70</b> <b>0301</b> (mech. speedo) or <b>30302</b> (elect ): <b>30702</b> (2 wired sockets/ GM jamb s 	or <b>70970</b> (ClassicBraid) <b>921</b> (PowerBraid) or <b>70971</b> (ClassicBraid) (pages 83) (pages 83) (c) (c) (c) (c) (c) (c) (c) (c
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SWITCH

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# Part Numbers By Page

PAINLESS PERFORMANCE PRODUCTS

Number Page	20106 23	30117 79	30803 80	40100 90	50334 50	60122 70
10101 10	20107 22	30118 63	30805 82	40102 88	50335 50	60124 70
10102 10	20110 24	30120 82	30806 82	40103 88	50336 50	60125 70
10103 28	20112 20	30127 63	30809 70	40105 90	50337 50	60127 63
10104 28	20113 20	30128 79	30812 39	40106 89	50340 50	60128 63
10105 35	20114 20	30129 79	30813 70	40112 89	50341 50	60129 63
10106 36	20120 27	30130 79	30814 80	40120 88	50404 48	60130 63
10111 38	20121 27	30131 77	30815 80	40121 88	50406 48	60131 63
10112 30	20122 27	30132 77	30816 80	40122 87	50410 49	60150 63
10113 34	20128 17	30133 63	30817 80	40123 87	50412 49	60201 67
10114 34	20129 17	30140 78	30818 18	40126 87	50420 49	60202 68
10117 33	20202 19	30141 78	30819 39	40130 93	50421 49	60203 69
10118 33	21000 18	30142 78	30821 80	40140 90	50430 49	60212 65
10120 12	21001 16	30143 78	30822 80	40141 90	50506 48	60213 65
10123 26	30001 91	30201 46	30823 80	40142 90	50710 89	60214 66
10127 25	30002 91	30202 46	30830 47	50001 44	55000 84	60215 66
10140 40	30003 91	30203 46	30831 85	50002 42	55001 84	60217 62
10144 41	30004 91	30204 89	30901 31	50003 43	55002 84	60218 62
10150 37	30100 79	30205 89	40006 93	50005 45	57000 75	60221 61
10201 11	30101 79	30206 89	40007 93	50101 91	57002 75	60250 72
10202 11	30102 79	30301 82	40008 93	50102 77	60008 60	60310 67
10203 29	30103 79	30302 82	40009 93	50105 46	60009 60	60311 67
10204 29	30104 79	30700 85	40010 93	50106 77	60017 62	60312 68
10205 32	30105 80	30702 83	40011 93	50201 44	60026 57	60313 68
10206 31	30106 63	30705 85	40012 93	50202 44	60101 67	60314 69
10220 13	30107 76	30706 85	40021 83	50210 49	60102 68	60315 69
10307 9	30108 76	30707 85	40022 83	50301 48	60103 69	60320 65
10308 9	30109 63	30708 83	40023 83	50302 48	60109 70	60321 65
10309 9	30110 79	30709 85	40024 83	50303 48	60110 70	60322 62
12000 94	30111 79	30710 83	40025 83	50305 48	60113 64	60323 62
12001 94	30112 79	30711 46	40026 90	50306 48	60114 64	60324 60
20101 18	30113 63	30715 21	40027 82	50330 50	60115 70	60325 60
20102 16	30114 79	30717 39	40030 85	50331 50	60116 70	60406 46
20103 14	30115 79	30720 85	40060 94	50332 50	60118 70	60502 64
20104 15	30116 79	30802 80	40065 94	50333 50	60119 67	60505 64
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# Part Numbers By Page

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60508 60	70213 92	70818 94	70940 73	71819 94	80116 89	80300 80
60509 60	70217 92	70819 94	70941 73	71830 94	80120 83	80400 51
60510 71	70401 93	70830 94	70956 73	71831 94	80121 83	80401 51
60511 71	70402 93	70831 94	70957 73	71832 94	80130 76	80402 51
60520 58	70403 93	70832 94	70958 73	71833 94	80131 76	80403 51
60522 59	70404 93	70833 94	70959 73	71834 94	80133 76	80404 51
60523 59	70406 93	70834 94	70960 73	71850 94	80135 76	80405 51
60524 56	70438 93	70850 94	70970 73	71851 94	80136 76	80411 51
60526 57	70690 94	70851 94	70971 73	71852 94	80140 89	80412 51
60550 53	70700 94	70852 94	70973 73	71853 94	80150 83	80413 51
60608 54	70701 94	70853 94	71710 94	71854 94	80151 83	80414 51
60617 55	70710 94	70854 94	71711 94	71855 94	80152 83	80415 51
60650 82	70711 94	70855 94	71712 94	71858 94	80153 83	80501 51
60700 53	70712 94	70858 94	71714 94	71859 94	80154 83	80502 51
60701 53	70714 94	70859 94	71715 94	71860 94	80160 77	80503 83
60702 53	70715 94	70860 94	71716 94	71861 94	80170 83	80510 51
60710 53	70716 94	70861 94	71800 94	71862 94	80171 83	80511 51
64023 70	70800 94	70862 94	71801 94	71863 94	80172 83	80512 51
64024 64	70801 94	70863 94	71802 94	71864 94	80173 83	80513 51
65100 46	70802 94	70864 94	71803 94	71865 94	80174 83	80514 51
65300 39	70803 94	70865 94	71804 94	71866 94	80175 70	80520 51
65301 39	70804 94	70866 94	71805 94	71867 94	80176 83	80521 51
65302 39	70805 94	70867 94	71806 94	71868 94	80200 82	80528 51
65303 63	70806 94	70868 94	71807 94	71901 94	80201 82	80529 51
66501 81	70807 94	70900 93	71808 94	80000 91	80202 82	80530 51
70103 92	70808 94	70901 73	71809 94	80101 91	80203 82	80531 51
70107 92	70809 94	70902 73	71810 94	80102 91	80204 82	80532 51
70113 92	70810 94	70903 73	71811 94	80107 51	80205 82	80533 51
70114 92	70811 94	70904 73	71812 94	80108 51	80206 82	80534 51
70117 92	70812 94	70910 73	71813 94	80109 51	80207 82	
70118 92	70813 94	70916 73	71814 94	80110 51	80208 82	
70120 92	70814 94	70920 73	71815 94	80111 51	80209 82	
70121 92	70815 94	70921 73	71816 94	80112 89	80210 82	
70203 92	70816 94	70922 73	71817 94	80114 89	80211 82	
70207 92	70817 94	70923 73	71818 94	80115 89	80230 80	

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